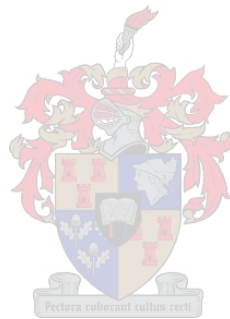


**AN EXPLANATORY STUDY OF FAMILY STABILITY  
UNDER CONDITIONS OF DEPLOYMENT**

**BY**

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**MARCH 2010**

## **DEDICATION**

**THIS THESIS IS DEDICATED TO MY LATE MOTHER AND FATHER FOR  
THEIR UNWAVERING SUPPORT**

## **DECLARATION**

By submitting this dissertation electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the owner of the copyright thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

March 2010

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## ABSTRACT

Contemporary militaries are facing an increasing number of deployments compared to their previous counterparts. This is the result of globalisation and the acknowledgement of interdependence between various countries. The demand is even higher in the South African National Defence Force because of its geographical and socio-political position. Emanating from its position it is endowed with the task of stabilising the continent. This is an important task considering the fact that no country can experience stability and economic prosperity if its neighbours are unstable.

The people performing the above highly venerated task are members of families with expectations. The demands posed by job demands in a form of deployment put tremendous pressure on even the healthiest of families. The situation is aggravated by the structure of most military families, cohesive nuclear families isolated from the support of extended families. The resulting conflict arising from the incompatibility affects all facets of a soldier's life and his/her family. The inevitable consequences include stress, and attitudes such as job dissatisfaction, marital dissatisfaction, and low life satisfaction. The culmination of these negative consequences spill over to work performance and family stability.

The family is the most disadvantaged domain because the military ethos enjoins soldiers to prioritise their work and treat the rest as secondary. This leads to an irrefutable destabilisation of families, which is a common experience in military families. The effects are more pronounced on women due to the social roles endowed on them. Their role in nurturance and emotional support make their absence more evident. The children are also not spared from the suffering. The effects of the fragmentation in the family affect their psychological wellbeing, their performance at school and their behaviour in general.

The reunion often marks an apex of the tragedy. Returning parents find changes at home, some feel out of sync and others force their way into the families. The family roles have to be renegotiated, which is a process fraught with conflicts. The parents who gained prerogatives in the absence of their spouses are usually unwilling to relinquish their prominent positions. This result in conflicts, which prompt the dissolution of families, and in some cases, fathers withdraw and ask for unaccompanied long-term duties away from home.

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## CHAPTER 1

### INTRODUCTION

#### 1.1 General introduction and orientation to the study

Today's militaries are faced with an increasing number of mission requirements including combat, peacekeeping missions, humanitarian relief, disaster responses as well as new requirements for domestic defence. This implies possible numerous, lengthy and unpredictable schedules of work for the soldiers. This exposes military families with challenges as they adjust to repeated and often lengthy periods of family separation (Stafford & Grady, 2003). The situation is aggravated by the emergence of globalisation, which heightened the interdependencies between different countries located in different geographical locations. This situation pronounced the importance of other countries in maintaining stability and prosperity in any given country. Domestic peace and stability will not be achieved within the context of regional instability (Neethling, 1998).

In a quest for global stability, military forces are deployed to maintain peace and assist in various humanitarian operations. The deployed soldiers are members of families and they play significant roles in their family systems. The deployment removes members from their families. The effects are more pronounced on married members, whose absence creates disturbance that is felt during and after deployments. The long periods of absence characterising these deployments have the potential to create disequilibrium, thereby negatively affecting the family stability. Consequently, some members dichotomise the situation, perceiving the military as a disabler that inhibits their families to function well, culminating into unwillingness to deploy, or into divorces.

Since military organisations are labour-intensive organisations, this situation poses a serious threat to the military establishments and their ability to perform their primary function of protecting the citizens. On a larger scale, the societies are also affected negatively since the families are the building blocks of the societies. The present study focuses on stability in families burdened with military long-deployments and

the process through which such deployments impinge on the family and the outcomes thereof. Knowledge regarding the process through which deployments affect family stability will help to guide the preparation of the deploying forces, the assistance that can be provided by the organisation, and the development of policies aimed at ameliorating the burden faced by such families.

In order to orientate the reader with regards to challenges threatening military families, this chapter will focus on deployment in general, the process through which it affects the families, and the possible consequences thereof, the rationale, importance and aims of the study, as well as research methodology are highlighted.

## **1.2 Background and motivation for research**

Deployment is defined by the Centre for Army Lessons Learned as the movement of forces within areas of operations, the positioning of forces into formations for battle and/or the relocation of forces and materiel to desired areas of operations (Adler, Huffman, Bliese & Castro, 2005, p.121). This creates unique demands providing many reasons for expecting that personnel are exposed to many stressors that may potentially inhibit them from performing non-work roles. This definition underlines the possible cause of many social problems experienced by military families.

Military families deal with issues common to all families, including child care, elder care, education, parenting concerns, and career choices. However, military families are also subjected to unique stressors such as frequent separation of members from families and subsequent reorganization of family life during reunion (Drummet, Coleman & Cable, 2003). For example, deployed soldiers usually spend more than five months on deployments separated from their families (Bridger, Kilminster & Slaven, 2007). Furthermore, extensions are not unusual in the contemporary era of manpower shortage (Steelfisher, Zaslavsky & Blendon, 2008). Previously this condition posed no problem since the military was composed mainly of single men, decrying the need for concern about family life.

Contemporary military families face job demands that comprise higher operational tempo, implying frequent deployments and increased family separations. This is



aggravated by the variety of missions and relocations ranging from brief periods of training exercises to extended periods associated with combat, humanitarian or peacekeeping missions. In addition, the degree of security, which may limit communication with family members or friends and interruption of future plans are all part of contemporary deployments (Newby, 2005). These factors create stressful challenges for families that, if not managed carefully, can threaten the family stability (Schumm, Bell, & Gade, 2000; Segal & Segal, 2003).

The military is also a high performance organization and have raised its expectations regarding time, energy and work commitment (Burke, 2000). This setting exhibits the type of work environment likely to produce work and family conflict (WFC). Howard, Donofrio and Boles (2004, p.380) define WFC as inter-role conflict in which responsibilities from the work and family domains are not compatible. Soldiers are frequently separated from their families for long periods of time, and even when soldiers are in their units, the level of workload places demands on even healthiest families (Britt & Dawson, 2005). Traditionally, families of military members were expected to adapt to norms and values of the military. Currently, the military's high demands on the family have sometimes been met with intolerance and dissatisfaction by military families (Drummet et al., 2003).

The military organisations may limit family members freedom to manage the borders by allowing little autonomy and flexibility, or by setting up negative repercussions if the individual does not have a certain amount of physical presence in the domain (Clark, 2002). Military life requires personnel to function in a wide variety of environments, which range from performing routine job assignments at large or small military installations, to working in field conditions, to being deployed to unfamiliar surrounding and perhaps stressful battle settings when required, making it difficult for families to function effectively (Federman, Bray & Kroutkil, 2000). The situation is aggravated by the persistent myth of separate worlds, which encourages many military leaders to act indifferently (Elloy, 2002). They foster conflict by inadvertently creating a set of demands on the individual that inevitably conflict with family time (Howard et al., 2004). The servicemen belong to the military and cannot decide how they wish to divide their time and effort between their job and family (Jolly, 1987).

The above situation tends to alienate spouses with unpredictable work schedules, indifference to familial needs and mandatory social functions (Kirkland & Katz, 1989). This prompted Lagrone (1978) to call the military profession a “total institution” due to the all-encompassing effect it has on the lives of its “inmates”. The periodic permanent change of station, stationing of personnel overseas, and lack of control over duty assignments are some of the factors that characterise its functioning (Pflanz, 2002). With increased magnitude and length of deployments, the demands posed by the profession have led to an increase in social problems experienced by families (Pflanz, 2002; Pflanz, 2006). The quest for international stability is being offset by an increase in family problems, and without intervention, these developments will soon threaten what is known to be the foundation of every society, the family (Newby, 2005).

### **1.3 Problem statement**

The effects of military deployments on families are not considered very often in organisational literature. This relative neglect is not surprising, as organisational literature tends to focus only on direct organisational consequences of organisational policies and practices on the bottom line. These practices were fuelled by authors such as Kanter in 1970s, who asserted in his separate-spheres model that work and family domains will not affect or conflict with one another (Stevens, Minnotte, Mannon & Kiger, 2007). In line with that belief, military organisations turned into what Segal and Segal (2003) call ‘greedy institutions’ because they sought exclusive and undivided loyalty from their members. A greedy institution is described as ‘a pattern of total devotion’. An example is the vocation of a priest, whose tie with the church is all-encompassing because the priest is bound to lead a celibate life, with the church claiming total devotion from such servants (Moelker & Van der Kloet, 2003; Drummet et al., 2003; Rosen & Durand, 2000).

The dethronement of separated-spheres gave way to the realisation of spillover between family and work environment. Spillover occurs when the experience of work affect family life or vice versa. The effects can be positive or negative. When spillover is negative it is sometimes referred to as conflict (Stevens et al., 2007; Pieterse & Mostert, 2005; Hill, Yang, Hawkins & Ferris, 2004) (see par 1.2).

The realisation of the deleterious consequences family can have on work-related behaviours such as performance, turnover and absenteeism served to increase interest in the field. Traditionally the focus was mainly on ameliorating the negative effects on job performance, to the neglect of negative impact on the family (Kirkland & Katz, 1989; Rosen, Moghadam & Vaitkas, 2000). The South African National Defence Force (SANDF) is also experiencing the same challenge of a substantial burden being placed on families experiencing deployments.

As a result of the foregoing argument, there is little information relating to how deployments affect military family stability in South Africa. Although, the military leaders have acknowledged the role of quality of life in helping military forces maintain acceptable levels of mission readiness, little research has been done on the topic. The research in other countries such as United States of America and Australia also indicate the importance of maintaining the quality of service to enhance mission and combat readiness (Wilcove, Schwerin, & Wolosin, 2003). Therefore, despite an increasing interest relating to the effect of deployments on family stability, there is little scientific research that explicitly examines this relationship. The aim of the present study is to identify the process through which military deployments affect family stability in the SANDF.

#### **1.4 Aims of the study**

The main aim of this study is to develop and test a structural model that explicates the nature of the impact of deployments on family stability. The aim is therefore to make use of a scientific research methodology to determine the validity of the anecdotal claims regarding the impact of deployments on military families.

#### **1.5 Research process**

The research will be conducted in seven phases, namely a literature review, empirical study, reporting of the results, discussion of the results, conclusions, limitations, and recommendations.

### **1.5.1 Phase 1: Literature review**

The focus of the literature review is to illustrate the process through which military deployments affect stability in military families. Specific focus areas of the study include:

- a. Cohesive family
- b. The job demands posed by the military organisation
- c. Work and family conflict
- d. Support
- e. Stress
- f. Marital satisfaction
- g. Family satisfaction
- h. Life satisfaction
- i. Family stability
- j. Job performance

### **1.5.2 Phase 2: Empirical research**

Data for this study was gathered by means of various questionnaires. Job demand was measured using The Demand-Control Questionnaire (DCQ) developed by Karasek (1990). The instrument is a 20-item subscale that measures psychological work demands, job control and workplace social support. The alpha reliability of the scale was 0.79.

Family cohesion was measured with Family Adaptability and Cohesion Evaluation Scales (FACES IV) developed by Olson, Gorall and Tiesel (2004). FACES IV assesses the dimension of family cohesion from the Circumplex Model. The instrument is a 10-item subscale that measures balanced cohesion, balanced flexibility, disengagement and enmeshment. The alpha reliability of the scale was 0.93.

Work and family conflict and family and work conflict was measured using a shortened version of Work and Family Conflict Scale consisting of 18 items developed by Frone, Yardley and Markel (1997). The scale measures the extent to

which work interferes with the family and family interferes with work. Scale reliability for work-family conflict was 0.91.

Stress was measured with Perceived Stress Scale (PSS) developed by Cohen, Kamarck and Mermelstein (1983). The subscale is a 14-item subscale that measures the degree to which situations in one's life over the past month are appraised as stressful. The instrument is designed to detect how unpredictable, uncontrollable and overloaded respondents find their lives. The instrument has established reliability of 0.85.

Job satisfaction was measured with Minnesota Satisfaction Questionnaire (MSQ) developed by Weiss, Davis, England and Lofquist (1967). The MSQ is a 20-item subscale designed to measure an employee's satisfaction with his/her job. It provides more specific information on the aspects of the job that an individual find rewarding than do more general measures of satisfaction. It is also useful in exploring client's vocational needs, in counselling follow-up studies, and in generating information about the reinforcers in jobs. The reliability of the scale is 0.80.

Marital satisfaction was measured with the Comprehensive Marital Satisfaction Scale (CMSS) developed by Mehrabian (2005). It is a 20-item instrument that measures the perception of intimacy in the relationship and emotional attachment (Brockwood, 2007). It measures both the individual's global feeling about the marriage (overall happiness, strength of love) as well as his/her satisfaction with specific aspects of the relationship (amount of understanding received, amount of love and affection, sexual relationship, and spouse as companion)( Bahr,Chappell, & Leigh,1983). Blum and Mehrabian(1999)reported the internal consistency of the scale to be 0.94.

Life satisfaction was measured with Satisfaction with Life Scale (SWLS) developed by Diener, Emmons, Larsen and Griffin (1985). The instrument is a 5-item subscale that enquires about the overall assessment of the respondent's live. It entails the comparison by individuals between their current status of their lives and self-defined expectations regarding what they would like their lives to be. This comparison may

be in relation to a self-defined ideal, to other people or to one's own past. The instrument has the reliability of 0.87(Corrigan, 2007).

Family stability was measured using an 11-items shortened version of Family Environment Scale developed by Moos and Moos (1983). The instrument assesses the extent to which family members are satisfied with the functioning of their families. The established reliability of the subscale is 0.80.

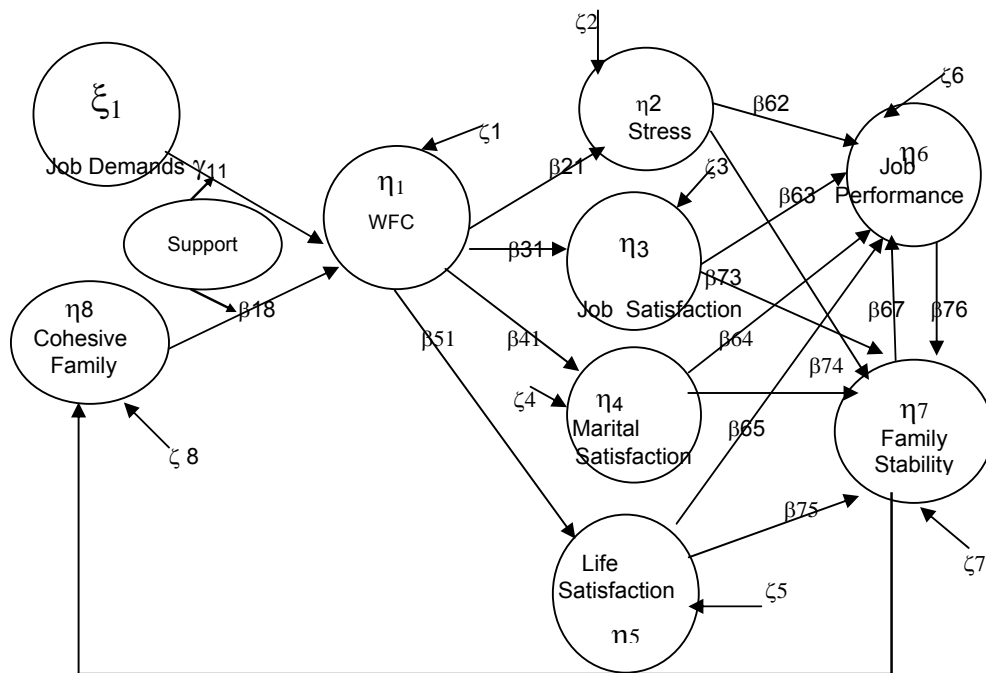
Job performance was measured using two instruments, one measuring basic task performance with 11 items developed by Borman and Motowildo(1993) and organisational citizenship behaviours was measured using the instrument developed by Podsakoff,MacKenzie,Moorman and Fetter (1990) consisting of 9 items. Two instruments were used to fully capture how job performance is affected by other variables. The subscale measuring basic task performance measures how well employees perform their basic tasks, with the reliability of 0.96. The subscale measuring citizenship behaviours assesses behaviours performed voluntarily. The instrument had a reliability of 0.94.

The applicability of the subscales in the South African context was established through item analysis and dimensionality analysis (see par 4.3 & par 4.4). Probability sampling was used. Probability refers to the mathematical chance of an event occurring (Babbie & Mouton, 2004). Stratified systematic sampling as a subcategory of probability sampling was intended to be applied to capture various homogenous subgroups of interest, as defined by rank (seniority) and gender. Stratified sampling is a method for obtaining a greater degree of representativeness, thereby decreasing the probable sampling error (Babbie & Mouton, 2004). The focus of the study will be based on the definition of Moelker and Van der Kloet(2003),including both married members and members who are in long term-intimate relationships for more than three months.

Using a cross-sectional survey design, questionnaires were administered to 369 soldiers who experienced deployment to gather quantitative data that was analysed for the relationship between various factors that culminate into family instability.

### 1.5.3 Phase 3: Reporting of results

Due to the fact that various statistical packages and techniques were used to analyse data, a discussion of the techniques will be limited to the appropriate section of the thesis (see par 3.7). The results include the table of fitting the Structural Equation Model (SEM) using the data, which will then be presented in the table form. Fig 1 below indicates the hypothesised relationship between variables of interest.



**Figure 1:** Hypothesised relationship between variables

### 1.5.4 Phase 4: Discussion of the results

The results and their explanations are discussed. The model fit is also discussed, including modified indices.

### 1.5.5 Phase 5: Conclusion

In this section, the results of the study will be summarised.

### **1.5.6 Phase 6: Limitations**

The limitations of the study, especially with regards to the design and the implications are discussed.

### **1.5.7 Phase 7: Recommendations**

Recommendations with regards to further research; how the results in this research can be used and guidelines for the development of pre-deployment training programs, follow up programs and post-deployment programs will be discussed.

## **1.6 Chapter division**

**The chapters will be presented in the following order:**

- a. Chapter 1: Introduction and orientation of the study**
- b. Chapter 2: Theoretical framework**
- c. Chapter 3: Research design and methodology**
- d. Chapter 4: Results**
- e. Chapter 5: Discussion of results**
- f. Chapter 6: Conclusions, limitations and recommendations**

## **1.7 Chapter summary**

The role played by military deployments on families is becoming common knowledge. Traditionally, the military and family spheres were regarded as two dichotomous institutions that are not related. This led to the lack of interest in the influence that military deployments have on family stability, making it a peripheral issue. The situation was changed by the realisation of the negative consequences that result from dysfunctional families. The emergence of the all volunteer force increasing the presence of a military force with diverse family responsibilities further served to indicate the urgency of the need to change the perception of the relationships between work and non-work roles. The delay displayed by military organisations in dealing with challenges led to the spurious research in the field.



Thus, in order to have effective deployment force, it is imperative that the impact of the utilisation of members be fully understood. Failure to take cognisance of the above relationship will threaten family stability, which will in turn have a negative effect on job performance. The current study will focus mainly on that challenge in the SANDF.

## CHAPTER 2

### THEORETICAL FRAMEWORK

#### 2.1 Introduction

A family is a definable open system that exists within a certain environment. Its openness makes it malleable to environmental influences. Thus, it affects and is affected by the environment within which it exists. This factor makes its functioning to be dependent to a certain magnitude on environmental factors in its proximity. Following that line of reasoning, there is a nomological network of factors to which military families are subjected to, affecting their stability. Some of those factors affect any family and some are peculiar to families experiencing military deployments.

Military deployments put pressure on important tenets that are known to be necessary to keep a family stable. However, there is variance in the extent to which such families endure such exposure. Particularly, nuclear families that are cohesive, and couples living in a long-term marital relationships are due to their limited support systems more vulnerable to deprivation that emanates from military deployments. However, the presence of extended families tends to ameliorate the destructive effects of deployments.

Unlike before, when organisations showed less concern for what was happening in families, the awareness of the spillover-effect pronounced the importance of families' well-being on organisations. There is reciprocation between what happens in the families and what happens in the organisations. This is particularly the case in service organisations that depend mainly on their employees for their day-to-day performance. This chapter will delineate how military families are affected by deployments by firstly describing how a typical military family experience deployments and the consequent effects on the employees' and families' health, attitudes and family stability.

## 2.2 Definitions of a family

From a systemic framework, a family is defined as a complex structure consisting of an interdependent group of individuals who have a shared sense of history, experience some degree of emotional bonding and devise strategies for meeting needs of individual family members and the group as a whole (Sabatelli & Bartle, 1995, p.229). A family is also defined by Adams, Durand, Burrell, Tietelbaum, Pehrson and Hawkins (2005, p.28) as a socially approved arrangement whereby two people initiate a relationship called marriage and attempt to achieve through this relationship happiness and well-being, to have and bring up children, if they so desire, to work out some of their personal problems and to gain a certain measure of emotional and financial security and physical and psychic satisfaction. Leyva (2003, p.49) define a family as a small kinship-structured group with the key function of nurturing socialisation. A military family is thus defined as a married man and woman or a man and a woman living together, with or without children, including any adopted children, residing at the same location of which at least one of the partners has a military occupation (Moelker & Van der Kloet, 2003, p.241).

While many family researchers have focused on couples that are married legally, other researchers have included couples in long-term cohabiting relationships. The defining characteristic is that the couple have been together for a certain length of time to be able to have developed some sort of shared history (Brockwood, 2007). It can be argued that this definition wrongly excludes the family with a son or daughter who either has a military career, or is in a male-male or female-female relationship. For practical purposes, the author will use this broad definition, which includes non-married couples who themselves claim to have a stable relationship. In most democratic societies, this type of couples is regarded as a 'family'. They have the same rights by law, they perhaps have bought a house together, and they share the responsibility for raising children (Moelker & Van der Kloet, 2003). This is also visible in the South African society, which gives similar rights to people in such relationships (Amoateng, 2004).

In the South African context, there is a high prevalence of extended families, especially among Africans from whom most of the sample was drawn (Castiglia,

1999). Extended families are described as the network of relatives beyond the nuclear family, which provides social, emotional and instrumental support (Pallock & Lamborn, 2006). Even when families live as nuclear families that are physically separated from the extended family network, extended families are not only important for interaction and communication but also for sharing resources (Lee, Park, Song, Lee, Park & Kim, 2002). Members engaged in paid labour send regular remittances to their extended families distant from them (Ilahi & Jafarey, 1999). Extended families help families to be adaptable and flexible to respond to elevated needs brought by their social and economic position (Brown, Cohon & Wheeler, 2002). To clearly map out the family and how its environment affects it, systems framework will be applied.

### **2.3 Structural framework of a family system**

Systems theory regards a family as a social system consisting of subsystems or structural elements (Minuchin, 1974). The systems approach highlights the connections in a special way. It highlights the particular ways that parts are related, providing a predictive component (Minuchin, Colapinto & Minuchin, 1998). Rather than limiting focus to isolated relationships, it focuses on complex networks of patterned interactions between definable units in its structure and their specific environmental context (Wedemeyer & Grotewant, 1982). Because the family functions as a unit, a disturbance in one aspect of its functioning will influence the entire family as a whole and its individual members (Lee et al., 2002). The family as an all encompassing unit consists of subsystems.

#### **2.3.1 The spouse subsystem**

The spouse subsystem is formed when two adults of the opposite sex join with the express purpose of forming a family. The agreement does not have to be legal to be significant, but members must be able to fulfil certain roles (Minuchin & Fishman, 1981) (see par 2.2). The subsystem has specific tasks, or functions vital to the family's functioning. The main skills required are complementarity and mutual accommodation. Members must develop patterns in which each spouse supports the other's functioning in many areas. They must develop patterns of

complementarity that allow each spouse to give in without feeling he has given up. Both husband and wife must yield part of their separated-ness to gain in belonging (Minuchin, 1974; Minuchin & Fishman, 1981). They must provide mutual satisfaction of the couple's needs without compromising the emotional environment necessary for growth (Dallos & Draper, 2000). The couple also faces the task of separating from each family of origin and negotiating a different relationship with parents, siblings and in-laws. Loyalties must shift, for the new spouses' primary commitment is to their marriage. The families of origin must accept and support this break (Minuchin, 1974). The patterns of interactions are established to govern the way each spouse experience self and partner. Behaviour that deviates from what has become accustomed will hurt and deviance will spark a sense of betrayal (Minuchin & Fishman, 1981).

### **2.3.2 The parental subsystem**

Parenting is defined as a single-minded unconditional desire to provide a loving and caring home (Kang & Jaswal, 2009, p. 39). The parental subsystem is formed when the first child is born in the family. The task of the parental subsystem becomes to socialise children without losing the mutual support that should characterise the spouse subsystem. A boundary must be drawn that allows the child access to both parents while excluding him/her from spouse functions (Minuchin, 1974). Many other aspects of child development are also affected by her interaction within the subsystem. Parents provide the framework within which the child may find roots, continuity and the sense of belonging (Kang & Jaswal, 2009). The child learns what to expect from those who have greater resources and strength. The child also learns to think of authority as rational or as arbitrary (Minuchin & Fishman, 1981). However, the child belongs to the sibling subsystems.

### **2.3.3 The sibling subsystem**

The sibling subsystem is the first social laboratory in which children can experiment with peer relationships. Within this subsystem, children support, isolate, scapegoat and learn from each other. In the sibling world, they learn how to negotiate, cooperate and compete. The actions they take in this subsystem can be of

significance in the subsequent course of their lives. In large families, they are divided into the young ones who are still undergoing nurturing and the older ones who are making contacts and contracts with the extrafamilial world (Minuchin, 1974). Families in which members enjoy spending time together foster a sense of security in children such that they are less fearful of negative appraisal from others from extrafamilial world. These results are especially important given that the majority of children entering adolescence are sensitive to peer criticism and susceptible to peer influence (Kelley, 2003). However, for the family system to function effectively, there are roles, hierarchy, boundaries, feedback loops, norms and rules and balancing mechanisms.

## **2.4. Functional mechanisms of the family system**

The division of a family into different subsystems necessitates certain mechanism to keep it functional and sustainable. The functional mechanisms used to keep the family system effective include roles, hierarchy, boundaries, feedback, norms and rules and balancing mechanisms.

### **2.4.1 Roles**

Each individual family member and the family as a whole have roles to play. At the individual level, the age-based changes in role expectations constitute positional developmental tasks. Developmental tasks refer to the changes in normative expectations for the family as a whole in terms of functions which it is expected to fulfil for its individual members and for the society (Minuchin, 1981). The forms of tasks which each family member fulfils depending on age and sex, include physical maintenance for family members through providing food, shelter and clothing, addition of family members through reproduction, socialisation of children for adult roles in the family and in other social groups (Levant, 1984).

A hierarchy of wage-earning that positions the male as primary breadwinners highlights the structurally based options and constraints informed by cultural choices (Hunter, 2001). In SA, families and households have been shaped by contemporary and historical, social and cultural and economic processes. These in turn has

affected family members' identity, roles and activities in domestic and public spheres (Montgomery, Hosegood, Busza & Timaeus, 2006). Fathering is so closely aligned with providing, whereby when men get involved in non-traditional father roles, they may be regarded as men who mother (Montgomery et al., 2006).

Another task bestowed on men includes maintenance of order within the family and between family members and outsiders, maintenance of family morale and motivation to carry out tasks in the family and in other groups and production and distribution of goods and services necessary for maintaining the family unit (Levant, 1984). However, soldiers need support from family members. When they are stressed, the other family members may feel the need to accommodate to his/her changed circumstances. The accommodation may be contained within the subsystem or it may permeate the whole system (Minuchin, 1974). In addition, parents have two major distinguished roles they play in extrafamilial relationships. The father is seen as the bridge by which the child reaches the outside world while the mother symbolises the emotional support, interpersonal sensitivity and help giving (Kang & Jaswal, 2009). The effective performance of roles depends on the existence of a hierarchy which articulates who has power to perform what and when.

#### **2.4.2 Hierarchy**

Every family has patterns that organise the hierarchy of power. They define the family pathways for making decisions and controlling the behaviour of its members (Minuchin et al., 1998). Power is not an absolute attribute. It is generated by the way family members actively and passively combine, enabling the intention of one or more members to prevail in determining the outcome of a transaction (Adler, Vaitkus & Martin, 1996). Patterns of authority are important in families because they carry the potential for both harmony and conflict and are subjected to challenge as family members grow and change (Minuchin et al., 1998).

Authority patterns that are clear and flexible tend to work well because they allow members to defer to each other's authority in particular areas (Minuchin et al., 1998; Levant, 1984). In functional families parents are responsible for their children. However, in dysfunctional families, the hierarchy may be violated.

For example, when conflict between a husband and a wife increases, a wife may get closer to her son, creating a cross-generational coalition that undermines the parent's role (Dallos & Draper, 2000). To manage and prevent the cross-generational coalition, the family has boundaries.

### **2.4.3 Boundaries**

Levant (1984, p.26) and Minuchin (1974, p.53) define a boundary as rules governing who participates in a given subsystem and under what circumstances. The boundary separates the system from other elements of the environment making it a distinguishable entity (Labate, Ganahl & Hansen 1986; Drummet, Coleman & Cable, 2003). Boundaries mark the thresholds that should not be crossed, as well as the conditions under which they are more permeable (Minuchin et al., 1998). The effectiveness of boundaries emanates from family rules that help govern the system, direct communication within the family, establish and regulate intimacy, provide stability and predictability in interactions (Larson, Parks, Harper & Heath, 2001). For the family to function effectively, boundaries between the subsystems should be clear and consistent (Minuchin, 1974).

At times boundaries can become diffused which can lead to enmeshment (Levant, 1984; Bell, Cornwell & Bell, 1988). This is similar to what Prest and Protinsky(1993) call fusion, referring to the extent to which individuals are 'stuck together' in relationships. People in such families do not have a clear sense of self as individuals. They operate from a more emotionally reactive basis and are more likely to develop symptoms such as anxiety or stress. In contrast, when boundaries are inappropriately rigid, disengagement may ensue (Levant, 1984; Bell, Tietelbaum & Schumm, 1996; Zabriske & McCormick, 2001). Such families are also likely to become dysfunctional because almost everything is fixed and rigid, including goals, roles, relationships, rules and norms. The father rules his family and limits its behaviour. He can also block healthy adaptations by limiting the behaviours of family members and by isolating the family system from the community (Bradshaw, 1988).



However, it is encouraged that the family structure is able to adapt when circumstances change. The continued existence of the family depends on a sufficient range of patterns and the availability of alternative transactional patterns. For a family system to maintain itself, it retains preferred patterns as long as possible and offers resistance to change beyond a certain acceptable range (Minuchin, 1974). Functional or healthy families have ample tolerance for normal variations in closeness and distance and low degrees of anxiety are sufficient to return the family to a balance. Members of functional families structure family activities on explicitness and clarity with regard to family rules and responsibilities. Furthermore, family members are strongly committed to the family and consider themselves in general to be mutually helpful and supportive. In contrast, in dysfunctional families, minor variations in closeness or distance frequently create anxiety (Larson & Wilson, 2001; Nice, McDonald & McMillan, 1981). As such, an ideal family is a moderately cohesive family for its ability to adapt when encountering challenges (Henry, 1994). However, the effectiveness of the family functioning depends on feedback.

#### **2.4.4 Feedback**

The family has feedback loops, which are information-processing mechanisms by which a system determines the nature of its present stage or the nature of the environmental disturbance or both and responds. There are two types of feedback loops. Negative-feedback loops respond to a deviation signal by a counteraction of the deviation in order to restore the prior state. Positive feedback loops respond to a deviation signal by output that amplifies the initial deviation in order to evolve to a new state (Levant, 1984). Positive feedback challenges destructive and unexamined rules, both covert and overt. In closed system families, the feedback loops are negative and work to keep the system frozen and unchanging. Feedback is also maintained in families by rules (overt and covert) that govern the system (Bradshaw, 1988).

### **2.4.5 Norms and rules**

Norms consists of all the agreements, formal and informal, explicit or implicit, which regulate and give order and purpose to the system. Social norms are experienced by individuals as expectations of other people, as well as the expectations that emerge from the self as the function of participation with other people. They evolve through democratic and nondemocratic processes. Families are the primary systems that socialise children about the norms and rules of the family and the society (Bradshaw, 1988). Norms give stability and a sense of unity to social systems, but they can also be the source of conflict in the social system. The norms and rules enhance stability but at the expense of the rights of individual members (Logres, 1990). To prevent the hindrance of family functioning by unnecessarily prohibitive rules and norms, there are balancing mechanisms.

### **2.4.6 Balancing mechanisms**

There are two systems of constraint that keep the family functional. The first is generic, involving the universal rules governing family organisation. For instance, there is a power hierarchy, in which parents and children have different levels of authority. There is also complementarity of functions, with the husband and wife accepting interdependency and operating as a team. The second system of constraint is idiosyncratic, involving mutual expectations of particular family members. The origin of these expectations is buried in years of explicit and implicit negotiations among family members, often around small daily events (Minuchin, 1974).

The family is constantly subjected to demands for change, coming from within and outside. Demands for change may activate counter-deviation mechanisms (Minuchin & Fishman, 1981). The system maintains itself by offering resistance to change beyond a certain range and maintains a preferred pattern as long as possible. Alternative patterns are available within the system. But any deviation that goes beyond the system threshold of tolerance elicits mechanisms which re-establishes the accustomed range of equilibrium. When situations of system disequilibrium arise, it is common for family members to feel that other members are not fulfilling their

obligations. This usually results in calls for loyalty and guilt-inducing manoeuvres, threatening family cohesion (Minuchin, 1974).

## **2.5 Family cohesion**

Timmer and Veroff(2000,p.39) define family cohesion as the degree to which members of a family spend and enjoy time together, work well together and care for one another. Stevens et al.(2007, p.2) defined cohesion as the extent to which family members are concerned and committed to the family and are helpful and supportive to each other. Cohesion is also described as the emotional bonding that family members have towards one another and ranges from disengaged to separated and from connected to enmeshed (Bell et al., 1988; Bischof, Stith & Wilson, 1992). Cohesion reflects perceptions of the amount of commitment, assistance and support that family members contribute to one another (Kelley, Herzog-Simmer & Harris, 1994).

Cohesion is a property of dyads or larger groups and ensures that members within subsystems feel closer to one another than to members of other subsystems. Troubled families often show either low cohesion or cross-generational coalitions, with parents being closer to their children than to one another (Feldman & Gehring, 1998)(see par 2.4.3). Cohesive families have qualities such as commitment to and appreciation for each other, togetherness, good communication and problem-solving ability (Schaneveldt & Young, 1992). The definition that will be used in this research will be the one by Stevens et al. (2007) due to its focus on structural aspects of the family.

The importance of family cohesion emanates from the nature of the contemporary societies. They require their workers to move away from extended families for better jobs and more money. This implies a physical move from support structures to a nuclear family, placing a tremendous pressure on a couple and their children (Wallace & Wallace, 1985). A nuclear family is defined as a family characterised by spouses and children separated from the extended family support system (Krysan, 1990, p.47). In the military deployment context, many seek support of extended family. This makes them neither self-sufficient nor independent to deal with

challenges (Montalvo,2000).To ameliorate the burden placed on family members, the results of earlier studies indicate that a moderate level of cohesion serve as a resource related to high levels of family functioning (Henry, 1994). A cohesive family will serve as point of departure in this study. However, the demands posed by the military organisations in a form of long-term deployments have the tendency to threaten the highly valued cohesion in families.

## **2.6 Job demands**

A job demand is described as the perception of psychological demands or the perception of workload, the work pace and possible conflicting demands posed by work (Adler et al., 1996). It refers to those physical, social and organisational aspects of the job that require sustained physical or mental effort and are therefore associated with certain psychological and physiological costs (Bakker, Demerout & Euwema, 2005). The more salient demands in the military include communication, leadership and relocation requirements (Ippolito, Adler, Thomas, Litz & Holzl, 2005). Karasek (1990), the prominent author on the topic and developer of the job demands instrument that will be used in this study, hypothesised that job demands (e.g. high workload) are not in themselves harmful, but when combined with low employee control, could lead to negative consequences (Dwyer & Ganster, 1991).

The military has an unusual pattern of demands it poses on its personnel and families. These include the risk of injuries or death, geographic mobility, long separations and normative constraints. These demands and strategies employed to meet them contribute to the perceived greedy nature of the military organisations. The military also attempts to reduce the claims of competing roles and status positions, and pressures individuals to weaken their ties with other institutions or persons that might make claims that conflict with their own demands (Rosen et al., 1990; Kelley, Hock, Jarvis, Smith, Gaffney & Bonney, 2002). Usually, soldiers are frequently separated from their families for long periods of time, and even when they are in garrison, the level of workload places demands on even the healthiest families. The stress caused by the demands placed on family life and high workload is a major source of marital discord (Britt & Dawson, 2005).

Contemporary military organisations are faced with an increasing number of mission requirements in a form of deployments (Stafford & Grady, 2003; Van Breda, 1995). Deployment is described as the assignment of military personnel to temporary, unaccompanied duty away from the permanent duty station (Stafford, 2003; Leyva, 2003). Deployment is defined by the Centre for Army Lessons Learned as the movement of forces within areas of operations, the positioning of forces into formations for battle and/or the relocation of forces and materiel to desired areas of operations (Adler et al., 2005, p.12). The definition and description imply the unique demands for movement of personnel providing reasons to expect that members are exposed to stressors such as separation from families and long working hours (Bridger et al., 2007).

Whether combat or peacekeeping, deployments can mean long stretches of time spent away from family and friends, with accompanying difficulties in communication with the home front (Adler et al., 2005). In the United States (US) Army, some dual couples (both couples serving in the military) separate for approximately two years. Units such as the 1<sup>st</sup> Infantry Division in the US, which deployed 12,000 troops, joined by hundreds of other soldiers from support units in 2004, are examples of such practices (Liewer, 2004). The situation is relatively better in the South African National Defence Force (SANDF) because on average the members deploy for a minimum period of six months per contingent (Bruwer, 2003). This will affect the functioning of the family due to the long period of absence of a spouse.

Brockwood (2007) found that job characteristics such as those posed by deployments predict the marital quality of the individual, as well as of the individual's spouse. In general, those variables fall into two categories. The first category includes psychosocial characteristics, such as supervisor support or the degree to which the job is enriching to one's life, which is expected to lead to spill-over of positive affective mood states. The second category includes structural characteristics, such as working hours or location, which are expected to affect the practical aspects of combining work and family. The military deployments' structural characteristics limit family members' freedom to manage the borders by allowing little autonomy and flexibility (see par 2.4.1), or by setting up negative repercussions if the individual does not have a certain amount of face-time in the domain (Clark,

2002). The expectation of superiors that employees should work overtime when they should be at home show lack of sensitivity to the employee's family responsibilities (Presser, 2000). Many members in the SANDF deploy routinely for several years in a row, resulting in a chronic state of family dysfunction (Van Breda & Kruger, 2001). The persistent myth of separate worlds encourages many leaders to act as if the soldiers' home domain does not exist (Elloy, 2002). This reinforces the assertion that the military organisations are 'total institutions' (Moelker & Van der Kloet, 2003; Lagrone, 1978). It is a way of life which is not easily amenable to change because the serviceman belongs to the military and cannot ultimately decide how (s)he wishes to divide the time and effort between the job and the family. The members are never off-duty; even on leave they must be contactable. Their private life can be opened to scrutiny of their superiors. They can also not avoid long or unsocial hours of work and they cannot withdraw their labour (Jolly, 1987).

The genesis of the all-volunteer force served as a watershed in the demographic profile of military practitioners. Previously, the military, like many other organisations, comprised mainly of single men, with little concern for family life. However, the new changes that saw an influx of diverse workforce necessitated complementary changes, which never materialised. Organisations, particularly the military, still seek exclusive and undivided loyalty from its members (Drummet et al., 2003; Greenhaus & Callanan, 1994). Military job demands in the form of deployments pose particularly difficult times of separation as defined by the following characteristics: they originate from outside the family unit, they directly affect all family members and they have a variable length of notification prior to onset, sometimes occurring with little or no warning (Eastman, Archer & Ball, 1990). Eastman et al. (1990) further noted that due to the nature of the demands, many service members tend to 'marry' the military and carry on an 'extramarital affair' with their families.

The above arrangements negate the complementarity expected of spouses in the spouse subsystem (Minuchin, 1981) (see par 2.3.1). This process creates disparity between family members, with their resultant withdrawal into their own support system. This approach is a norm in poorly integrated units, which alienate spouses with unpredictable work schedule, indifference to familial needs and mandatory social functions (Kirkland & Katz, 1989; Schumm, Bell & Gade, 2000; Bruwer, 2003).

Norms are described as taken-for-granted beliefs about how people should think and behave. They are unwritten rules that prescribe the ways in which all members of an organisation should approach their work and interact with one another. They are collective agreed-upon behaviours, attitudes and beliefs that give employees a shared meaning of the workplace. They govern how organisational members should respond to request for help and support regarding the job (Hammer, Saksvik, Nytro, Torvatn & Bayazit, 2004).

Norms that emphasise job performance, attendance and organisational commitment accentuate the expectations that employees should place the demands of their work roles ahead of the demands from non-work roles (Hammer et al., 2004; Cullen & Hammer, 2007)(see par 2.4.1). These norms for performance make employees more aware of how their work interferes with their ability to meet family responsibilities, and this heightened level of interference leads to increased strain (Cullen & Hammer, 2007). This is part of organisational culture that affects all involved families even after personal attributes such as age, education, job experience and family situation are taken into account (Gerson & Jacobs, 2001).

The military culture also contributes to the perceived greed of military organisations. Organisational culture is defined as the shared values and beliefs about the activities of the organisation and interpersonal relationships (Yukl, 2002, p.241). It explicitly demands commitment of the service members regardless of personal costs and implicitly requires an equal amount of commitment from the family of the service members (Drummet et al., 2003). This is aggravated by the contemporary environment in which smaller forces engage in an increased number of operational commitments worldwide, but with fewer human resources, causing families to be separated more frequently (Dandeker, French, Birtles & Wessely, 2006). This creates the institutionalisation imposed on members negating the concept of Ubuntu to the family system, which emphasises collectiveness and interdependence (Nefale & Van Dyk, 2003)(see par 2.5). The absence of Ubuntu leads to intra-psychic tension, conflicts, frustration and as a result, a disintegration of basic human relationships (Mnyandu, 1997). The adverse affects of job demands can be ameliorated by the presence of job autonomy.

## 2.7 Job autonomy

Job autonomy is defined as the degree to which the job provides substantial freedom, independence and discretion to the individual in scheduling the work and determining the procedures to be used in carrying it out (Fu & Shaffer, 2001, p.502). To clearly elaborate the moderating effect of control or autonomy, the most influential job stress theory is Karasek (1990)'s job demand-control model, which links perceived control and stressors. The theory suggests that there are two important elements involved in the job-stress process, namely control and demands. In this model, control buffers the effects of demand, such that high-demand jobs lead to adverse reactions only among employees who have low control. Employees with high control see such demands as challenges to be overcome rather than threats (see par 2.6). When a person perceives control in a situation, he or she will be less likely to perceive it as a stressor. However, to be effective in reducing perceived stressor, the control must be over work tasks and the incumbent must feel free to use a variety of procedures to do the job (Spector, 2002; Karasek, Brisson, Kawakami, Houtman, & Bongers (1998). The instrument that will be used, congruent with the above assertion is Karasek(1990)'s job demand-control questionnaire(see par 1.5.2).

The military service is however characterised by little autonomy and long working hours (Pawar & Rathod, 2006). Job autonomy provides a resource that workers can draw upon to manage work and family roles. Workers whose jobs provide autonomy may be better able to balance the demands of work and family because of the instrumental value of increased scheduling flexibility, and the psychological enrichment and gratification it provides (Premeaux, Adkins, & Mossholder, 2006; Karasek, 1990). In contrast, in high strain jobs (i.e. high demands, low control jobs), the high job demand creates arousal, which cannot be transformed into action to get the job done. Instead, the arousal associated with such high demands will be directed internally with deleterious consequences, including fatigue and exhaustion (Yperen, 2002). On the other hand, high demand high control jobs result in increased learning and motivation (Akerboom & Maes, 2006).



Control over the scheduling of one's work hours has been linked to lower perceptions of work and family conflict (WFC) (Beauregard, 2006). Mesmer-Magnus and Viswesvaran (2005) found that this could be attributed to schedule flexibility to handle work and family demands without having to contend with restrictive schedules and close supervision. Schedule flexibility refers to the ability to alter one's work schedule to meet work and non-work pursuits, including the family (Elloy, 2004). Research in the US has consistently documented that if work and family interactions are flexibly structured in terms of time and space, then outcomes in the form of time, energy and behaviour are generally more positive. Job flexibility in the location and timing of work was found to be linked to reduced WFC and to enhance work-family fit. An employee can work long hours interspersed with several hours of family time each day, which may prove to be less intrusive (Hill et al., 2004). Fig 2 below illustrates that effect.

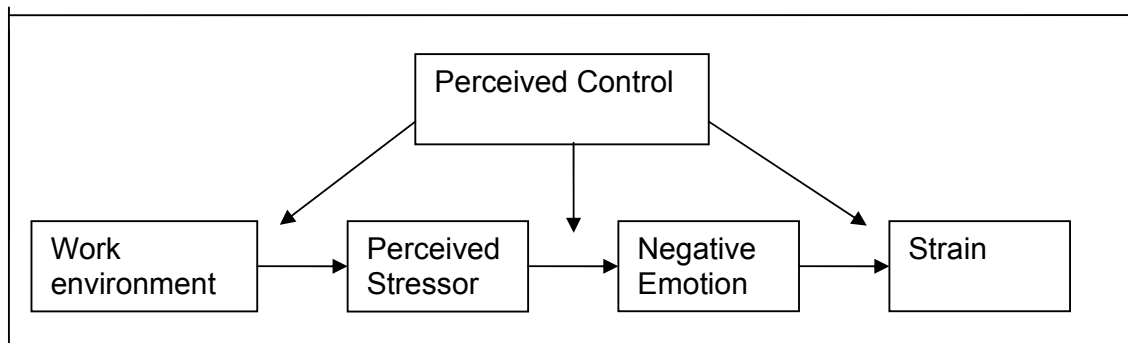


Figure 2: Control Model of occupational stress: adapted From Spector(2002)

Figure 2 indicates the ameliorative effect of perceived control on perceived stressors emanating from work environment. The model indicates that when an employee perceives himself or herself to have control over the work environment, the perception of stressor is ameliorated, with the resultant limited negative emotion and strain.

On a cognitive level, work socialisation theorists emphasise the opportunities for self-determination that a job offers and argue that greater opportunity to exercise self-direction at work improves cognitive habits and skills. It is also argued that the degree of self-direction exercised on the job shapes more general attitudes and values. People are believed to generalise attitudes, values and approaches learned

or encouraged on the job which are then carried over to other settings as well, including family life. The process is called the role-person merger in which the attitudes and behaviour acquired in one social role are displayed in other settings as well. Job influenced changes in cognitive skills and attitudes have been shown to influence the way that individuals spend their time off the job. Lower opportunities for self-direction also shape more socially conservative and guarded orientations to society (Menaghan, 1991) (see par 2.6). In addition, various forms of support help employees to manage the demands of both work and non-work roles.

## **2.8 Support for military families experiencing deployments**

Social support refers to interpersonal and social relationships that help to protect individuals from the effects of stress (Aycan & Eskin, 2005). Social support can be divided into two global types: emotional and instrumental support. Emotional social support is characterised by caring and listening sympathetically to another person. Instrumental support is characterised by rendering tangible assistance, such as physical assistance or aid in the form of advice or knowledge needed to complete the task (Fenlason & Beehr, 1994). The hypothesis that social support buffers the impact of stressors on psychological and physical health has been tested in a variety of settings with inconsistent results. In order for buffering to occur, the type of support provided must match the coping requirement produced by the stressful life event. Implicit in this is the idea that only certain types of support will buffer the impact of certain types of stressors. Several studies have already found evidence to support this postulation (Rosen & Moghadam, 2000).

Lapierre and Allen (2006) asserted that social support is a resource to an extent that it provides or facilitates the preservation of valued resources, such as time and energy. Generally, social support refers to help from, and acceptance by one's co-workers and immediate supervisors (Hammer et al., 2004). The conceptualisation of organisational support in this context resembles the construct of work-family culture that comprise managerial support for work-family balance, career consequences associated with utilising work-family benefits, and organisational time expectations that may interfere with family responsibilities (see par 2.6).

Instrumental supervisory support is a facet of organisational support and refers to the provision of direct assistance and advice with the intent of helping an employee to meet his or her family responsibilities. Supportive supervisors are instrumental in making and interpreting organisation's work-family policies. On the other hand, emotional supervisory support refers to sensitivity towards the WFC issues, and genuine concern for the well-being of the employee and his/her family. The importance of supervisory support is emphasised to such an extent that some researchers asserted that the well-being of families lies largely in the hands of first-line supervisors (Aycan & Eskin, 2005). In contrast, poor interpersonal relationships with supervisors and co-workers stimulate negative emotions and increases emotional distress (Menaghan, 1991).

Mesmer-Magnus and Viswesvaran (2005) found that support received from work environment is related more to measures of WFC than to family-to-work conflict (FWC). In the military operational context, social support variables are factors such as cohesiveness of the military unit, the loyalty to one's unit and unit morale. Group cohesiveness has been identified as the most important single variable absorbing the impact of severe stressors and reducing their adverse consequences. Group cohesion is defined as the dynamic process that is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and the satisfaction of member's affective needs (Ahronson & Cameron, 2007, p.9).

A cohesive group may be regarded as an optimal support system in time of crisis because it provides emotional support, information, instrumental help and companionship. It bolsters one's self-esteem and provides mutual support, which is a more powerful stress buffer than unilateral support (Milgram, Orenstein & Zafir, 1989; Griffith & Vaitkus, 1999; Noy, 1991; Ahronson & Cameron, 2007). In deployments, the deficiency of support is demonstrated by lack of sufficient job resources, such as insufficient personnel to handle the workload, inadequate remuneration, co-workers not doing their jobs, lack of recognition and lack of opportunities for advancement (Sempene, Rieger & Roodt, 2002).

Figure 3 demonstrates the relationship between a supportive organisational environment and organisational and individual consequences. The characteristics of leadership have the potential to reduce the effects of stressors on attitudes and strains. If the leaders are clarifying the expectations associated with different roles, supporting the employees and rating both officers and non-commissioned officers well, the resultant attitudes will be job engagement, self-efficacy which will culminate into group efficacy and result in consensus from the followers. Furthermore, good leadership has the potential to buffer the effects of stressors such as environmental conditions, task insignificance, lack of clear guidelines, high workload, long working hours and lack of sleep. Aspects of leadership and the resultant attitudes can also serve as mediating variables by reducing the impact of stressors on consequent strains.

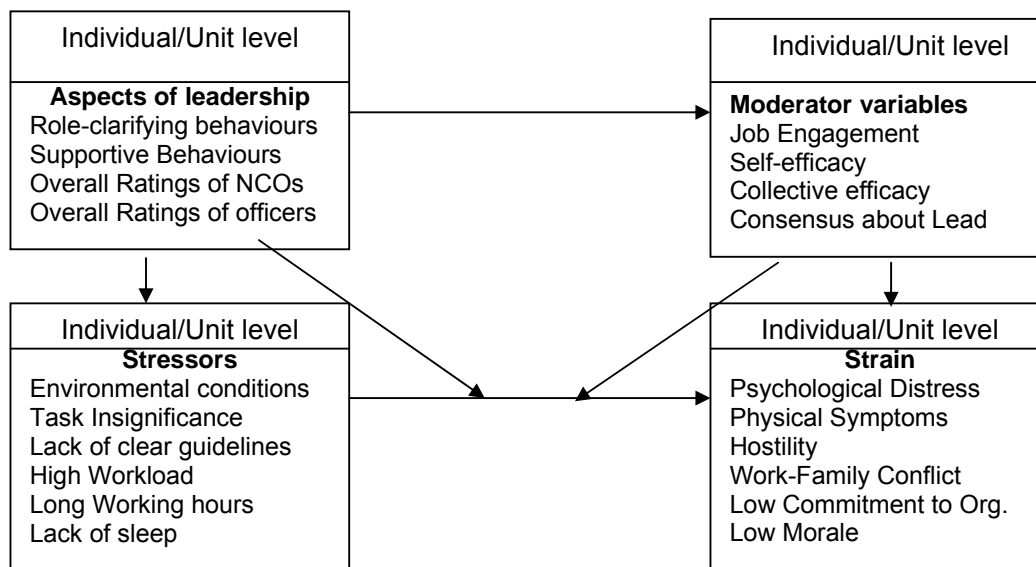


Figure 3: Theoretical framework relating leadership to soldier's well-being: adapted from Britt (2004)

Another component of organisational support is family supportive organisational policies. Family supportive organisational policies are described as services and allowances such as flexitime, job sharing and childcare facilities that are designed to help employees to make arrangements to balance their work and family responsibilities (Aycan & Eskin, 2005)(see par 2.6). Supervisors who support and advocate for their subordinates make their subordinates perceive that their supervisors care. Supervisors need to be viewed as being supportive, willing to be

flexible and allowing the subordinates some control if social leadership is to be maximized (Howard et al., 2004).

Lack of support in the work environment is consistently highly rated as a source of stress by employees (Thompson, Kirk & Brown, 2005). The presence of social support, while not leading directly to better coping, is associated with other areas of better coping. For example, subjects who experience unpredictable deployments but feel supported by the unit cope better than those who are not supported (Van Breda, 1995). While similar working conditions affect female and male workers in similar ways, it is believed that men are more likely than women to obtain privileges that give them more felicitous work circumstances due to the andocentric nature of the military organisations (Gerson & Jacobs, 2001).

At the home front, perceived availability of support from other military spouses in the spouse's unit has a buffering effect on the stressor of the spouse's absence. The stressor is described in this context as the number of days per month that the husband in the battalion is away in the field. Support in this context is defined as the wife's perception of being able to count on other wives in her husbands' unit for certain types of assistance (Rosen & Moghadam, 2000). Military families need social support to cope with separation stressors. Social support systems, including friends, children, relatives, work colleagues, church members and support groups have been positively linked to separation adjustment for military families (Drummet et al., 2003).

In most African cultures, extended families offer significant support that help to buffer the stressor of deployment. For example, children are members of the broad extended family and arrangements for their upbringing and care are the concern of not only their biological parents but also an extensive network of relatives (Nyamukapa & Gregson, 2005). Extended family support networks protect children from the disruption caused by employment instability and marital instability (Brown et al., 2002). Extended family can also provide children with role models to temporarily substitute the deployed parent (Castiglia, 1999). Pallock and Lamborn (2006) in their American study found that children with stronger extended family support were more engaged in school, held stronger school values and had higher school aspirations and expectations.

Studies in South Africa (SA) and other countries indicate that military families use formal support structures in addition to informal support services during deployments to their benefit (Van Breda & Kruger, 2001). During operation Restore Hope in Somalia, deployed US soldiers' spouses were found to be less affected negatively than their operation Desert Shield and Desert Storm counterparts. This success was attributed to the outstanding support system Fort Drum put in place. Spouses made use of informal support sources such as friends, neighbours, co-workers and formal support such as Rear Detachment Commands, family support groups and other spouses (Bell et al., 1996).

In the SANDF every military unit has a Military Community Development Committee consisting of the Commanding Officer, a social worker, psychologists and other members of the unit and health team who are able to identify needs in the unit. The committee addresses these needs through programmes and projects (Van Breda & Kruger 2001). In addition, the chaplain services are also enlisted to alleviate challenges facing families. The resilience programme was introduced as a package to be used by chaplains to deal with the exigencies of deployments (Cornelissen, 2007). However, Van Breda and Potgieter(2002) found these support elements to be insufficient, demanding more attention.

Support, from the soldier's point of view involves warmth and caring between family members (Bell et al., 1988). Spousal support is the help, advice, understanding that spouses provide for each other (see par 2.4.1). Two forms of support have been conceptualised in this context and empirically tested. Emotional support includes empathetic listening and understanding, affirmation of affection, advice and genuine concern for the welfare of the partner. It is similar to what Stevens et al.(2007) call emotion work, referring to management of feelings within the family, providing support and encouragement to others. It is the work done to enhance emotions and is aimed at improving an individual's emotional well-being.

In contrast, instrumental support is tangible help from the partner in household chores and childcare. Instrumental spousal support eases the burden of family demands and enables individuals to devote more time to work (see par 2.3.1). On the other hand, emotional support enhances feelings of self-efficacy both at home

and work (Aycan & Eskin, 2005). In the study of military spouses by Moelker and Van der Kloet (2003), sixty-four percent agreed that the support from families, friends and neighbours is more useful to them than the family support rendered by the military. People finding changes in marital roles difficult tend to find the whole deployment experience difficult, feel unsupported by other members of the unit and experience more stress, anxiety and marital conflict (Van Breda, 1995). The members of the SANDF are also confronted with those realities.

## **2.9 Deployments in the South African National Defence Force**

The White Paper on Defence stipulates that the SANDF may be employed for service in compliance with the international obligations of the Republic with regard to international bodies and other states (Mbeki, 2006; LeRoux, 2004). The SANDF started participating in peacekeeping operations on the 5<sup>th</sup> of April 2001 (Bruwer, 2003). The involvement can be attributed to ongoing conflicts in Africa and South Africa's leadership position in conflict mitigation on the continent. In 2006 there was a total of 3,109 members deployed in six African states (Mbeki, 2006). In 2008, there were still approximately 3,000 troops deployed in various African Union (AU) and United Nations (UN) peacekeeping missions. In the same period, the government approved additional deployments to African Union/United Nations missions in Uganda, Eritrea, Ethiopia and Nepal increasing the burden (Boshoff, 2008). In March 2009, there were a total of 2,826 soldiers deployed in such missions (Boshoff, 2009).

The magnitude of missions involving the promotion of peace, security and stability in Africa have escalated to such an extent that in 2006 the SANDF was the tenth largest troop-contributing country to the United Nations in the world (Mbeki, 2006). This led to a situation where the SANDF does not have enough personnel to meet the demands of its current operational commitments without difficulties (Heitman, 2005)(see par 2.6). This fact was highlighted by the situation in Burundi where, despite the official completion of the mission in June 2009, the 1,100 soldiers withdrawn were faced with the possibility of being transferred elsewhere (Boshoff, 2009). These demands are posed on a force structure composed of 70,000 personnel both uniform and civilian (LeRoux, 2004). This force utilisation contradicts

the provision made by the Department of Foreign Affairs White Paper on Peace Missions, drafted in 1998.

According to the White Paper, the strength of the force allows the deployment of one battalion at a time, but the SANDF is in most cases deploying three battalions concurrently (Boshoff, 2009). This poses pressure on the human resources because when a battalion is deployed, another battalion should be in training whilst a third battalion should be recuperating. Practically, whenever one battalion is deployed in peace missions, three battalions are actually taken out of the system (Engelbrecht, 2009). Consequently, the SANDF has been forced to deploy some of its personnel for six months in an eighteen months cycle and some for six months in twelve months cycle (Heitman, 2005) (see par 2.6). This puts pressure on deploying members' ability to fulfil roles expected in their families (see par 2.4.1).

However, the lucrative financial benefits that accrue have shown to overshadow the negative effects on families (Yang, Miao, Zhu, Sun, Liu & Wu, 2008). The results were corroborated in the Belgian military by the study of Lescerue and Schreurs (2008). The same results were found to in the US Army (Kelty, 2005; Naddra, 1978). Furthermore, the voluntary nature of deployment abscond the SANDF from any perceptions of inconsiderate utilisation of its human resource. Consequently, other family members have to take over the roles of a deploying member, affecting the family system's boundaries.

## **2.10 The effects of deployments on families**

The inevitable consequence of separation emanating from deployment is the fragmentation of the family system, affecting all the facets thereof. The effects reverberate throughout the entire system, threatening the ability to function optimally. Although some families experience separation as less stressful, some find it devastating.



### **2.10.1 The effects of deployments on roles**

When family roles are functional, family members complement each other's roles according to prevailing behavioural patterns (Paavilainen, Astedt-Kurki, Paunonen-Ilmonen & Laippala, 2000). Routine separation of soldiers from their families is a common practice in the military (Van Breda, 1999). When a spouse is assigned on duty away from home, the remaining spouse has to take over his/her family functions (Lagrone, 1978; Minuchin & Fishman, 1981). Traditional roles become intensified for the spouse, who as a result of the situation is forced to play father-mother roles, affecting the boundaries (see par 2.4.1). Separation tends to lead to the development of dysfunctional family structures (McCubbin & Dahl, 2000).

In some families, the member who separates is pushed out of the family in order for the family to cope without him/her during separations (Van Breda, 1999)(see par 2.4.3). In such cases, the family is able to transform itself in ways that meet new circumstances without losing continuity that provides a scope of reference for its members (Lagrone, 1978; Minuchin, 1974). However, the negative consequences are clearly accentuated during the family reunion. Reunion is described as the process of opening the family ranks to include the father, realigning power and authority, reworking the division of labour and responsibilities, sharing the home and family activities with the father, renewing the husband-wife intimacies and confidences. This process is usually fraught with discontent in the family (McCone & O'Donnell, 2006; McCubbin & Dahl, 2000).

Deploying fathers report disrupted communication patterns, feeling 'out of the sync' with the rest of the family, losing their authority in the family and experience difficulties in respect of maintaining strong parent-child relationships (Kelley et al., 1994; Drummet et al., 2003). Most wives who moved into the central role of decision-making tend to display unwillingness to relinquish their temporarily granted powers (Elder, Shanahan & Clipp, 1994)(see par 2.4.2). This results in disrupted generational boundaries, creating confusion in parent/children roles or some role reversal (Bentovim & Kinston, 1991).

Iraq and Afghanistan veterans after a yearlong deployment experienced that their wives took over most of their responsibilities such as managing finances and making important decisions concerning home and family. The wives were not eager to relinquish the role of financial management and other acquired prerogatives to their veteran husbands (Friedman, 2006). Consequently, veterans tended to feel superfluous or excluded from the family system (Bell et al., 1988; Drummet et al., 2003). Van Breda and Potgieter (2002) found that in the SANDF, men often wanted to retain financial control even when deployed in another country. This implies rigid boundaries that hinder effective family functioning in the absence of the husband. This was found to have the potential to create conflict and threaten the stability of the family.

### **2.10.2 The effects of deployments on norms and rules**

When the father is deployed, children depend on the mother and themselves, not only for matters of existence but also for emotional support. This makes it difficult for the parent remaining behind to single-handedly maintain the rules and norms of the family. During that period, some mothers even allow their children to share their sleeping areas with them when their fathers are away (Lagrone, 1978). This has an effect of diffusing boundaries, leading to enmeshment (Levant, 1984)(see par 2.4.3). The parents who could not set boundaries were found to be seductive and overprotective, leading to dysfunction in a child's subsystem. The non-observance of rules and norms makes fathers ineffective, unable to effectively enact paternal roles and hence they become a poor role model for their sons (Eleck, Lids & Comelison in Levant, 1984)(see par 2.4.1).

Since the behaviour of one member immediately affects others, the stress from neglected norms and rules in an individual member reverberates strongly across the boundaries and is swiftly echoed in the other subsystems (Minuchin, 1974) (see par 2.10.2). This could lead to severe fragmentation, disruption, chaotic and possible fixation on a topic (Bentovin & Kinston, 1991). Consequently, the family system will get more and more impoverished and devitalised, ultimately becoming unavailable as a source of growth for its members (Minuchin, 1981) (see par 2.3).

### **2.10.3 The effects of deployments on boundaries**

The absence of a spouse necessitates the remaining spouse to assume responsibilities of both spouses. This has an influence on boundaries. The remaining spouse may reassign some of the responsibilities to children, particularly adolescents, closing the ranks for the deployed member. This practice results in independence of wives and enmeshment of boundaries (Minuchin, 1974; Van Breda, 2002). The closing of ranks within a family is a common phenomenon among families experiencing separation. While this type of family reorganisation enhanced successful separation adjustment, it proved to hinder adjustment at the time of reunion (McCubbin & Dahl, 2000). Usually, families that resolve boundary ambiguity and reassign responsibilities may find that the individuals who assume these duties are reluctant to relinquish them (see par 2.4.1). In fact, they may become frustrated if they have to give them up to maintain family harmony, threatening the family stability (Bell et al., 1988; Drummet et al., 2003; Van Breda, 2000). Some members feel suspicious, threatened, uninvolved or cut off or insular (Bentovin & Kingston, 1991).

In contrast, in other families “ranks are kept open,” resulting in the family member being welcomed back easily on return, but the family disintegrates during his absence (Van Breda, 1999; Van Breda, 1998). Such families are usually traditional patriarchal families where the husband is sovereign and exercises control and visible power with a woman being kept submissive (Jordan & Jordan, 1998). Families with such overly rigid boundaries, denying members emotional supports are disengaged (Minuchin, 1974). Van Breda (1999) asserts that in such families, members experience predictable and typical sets of emotions, including low self-esteem, distress and decreased satisfaction with life.

### **2.10.4 The effects of deployments on hierarchy**

The reassignment of roles affects the power structures of the family. Members from the sibling subsystem may assume the roles in the executive subsystem, frustrating the normative family hierarchy. For many families, the returning veterans had become strangers in their families, whose roles and powers have been reallocated

(McCubbin & Dahl, 2000). This sets the stage for tension-filled reunions. In some cases, men return to broken marriages (Elder et al., 1994). In others, mystification occurs, which refers to the process that is created when one or more members of a system fail to understand the meaning and/or purpose of a communiqué from another member (Stover, 2005).

The situation of family life for Negro men can be used as an example. Their instability can be attributed to the absence of important members of the family system, the father in the childhood home and the absence of a mother during adulthood (Duncan & Duncan, 1999). Such families are likely to have very weak family identity (Bentovin & Kinston, 1991). In the SA Navy, Van Breda (1998)'s study found 59% of the families experiencing difficulties in shifting roles to allow the husband to resume their positions as head of the families. Consequently, the balancing mechanisms are also affected negatively.

#### **2.10.5 The impact of deployment on balancing mechanisms**

Since the family is an open system, it is affected by events occurring in its environment. The family exchanges information and energy with the outside. Fluctuation is normally followed by a response that returns the system to its steady state. When the fluctuation amplifies, the family may enter a crisis in which transformation results in a different level of functioning that makes coping possible (Minuchin & Fishman, 1981). Working non-standard schedules profoundly affects the temporal aspects of family life (Presser, 2000). In the military, routine separation of employees from their families is a common practice (Van Breda, 1999) (see par 2.6). This causes the marriage and the balancing mechanisms to be threatened. Long separation, even for those who have been married long enough to achieve considerable stability, places a strain on marriage relations. Cooperative patterns of activity must be broken and the affectional relationship so fundamental to marriage becomes difficult to maintain through correspondence. Whether the marriage is of short or long duration, many new habits and attitudes develop out of differential contacts during the deployment period which can create conflict, whether during the deployment or afterwards (see par 2.5).

### **2.10.6 Effects of deployments on spouse subsystem**

One of the main functions of the family is to support its members. When a member is stressed, the other family members may feel the need to help him/her (Minuchin, 1974). In the families of deploying service members, the soldiers find themselves removed from their spouses, placing burden on the remaining family members, particularly the spouse (Kelley, 1994; Van Breda, 2008)(see par 2.4.1). The results of disruption permeate all levels of the family system (Montalvo, 2000). The resultant dissatisfaction create dysfunctional patterns in the family such as enmeshment and disengagement.

The remaining family members are then compelled to become more dependent on one another for the physical labour and emotional support previously offered by the other spouse (Montalvo, 2000) (see par 2.3.1). It is not unusual for the returning spouse to be rejected, and to experience an extremely weak, divisive or conflict filled relationship. Such spouses repeatedly disagree, act without regard for one another, and one spouse repeatedly takes over or opts out (Bentovin & Kinston, 1991).

### **2.10.7 Impact of deployment on parental subsystem**

Whether the marriage is of short or long duration, many new habits and attitudes develop out of separation during the deployment period which can create conflict (Barrett, 2006). When there are children, the relationship between mother and children may become one of such intimate attachment that it virtually precludes the father as the participant in the family system (Lagrone, 1978; Barrett, 2006; Minuchin & Fishman, 1981) (see par 2.3). The children may also widen the gap between parents, even to crystallise it resulting in the role of the 'bad father' (Minuchin & Fishman, 1981). The inevitable poor communication can lead to child maltreatment (Paavilainen et al., 2000). This has a tendency of affecting the entire parenting approach, leading to the suppression of the basic developmental needs of children and teens (Pallock & Lamborn, 2006). Both parents may as a result of their consistent conflict ignore, exploit, continuously attack or disqualify the children (Montovin & Kinston, 1991). This may result in the development of low self-concept and poor school performance of children (Pallock & Lamborn, 2006).

### **2.10.7 Impact of deployment on sibling subsystem**

The emotional distance that develops between parents can lead to resentment between them and makes it difficult to work together as parents (see par 2.3.2). The children who experience parental or family conflict are likely to show possible poor adjustment (Cooper, Holman & Braithwaite, 1983). If the family is unstable, children bear the brunt of much parental hostility, such as being encouraged to take sides in parental disputes or being ignored as parents become preoccupied with their own problems (see par 2.3.2). Any of those approaches could affect a child's self-esteem adversely, especially if they are interpreted to mean rejection by at least one parent (Cooper et al., 1983). This also deprives the children of the sense of security, emanating from the family spending time together, which results in fearfulness of negative appraisal by peers, disruption in cognitive and social competency, and increased antisocial behaviour in children (Kelley, 2003; Kang & Jaswal, 2009).

The siblings may also fight continuously, or ignore each other or display extreme rivalry and competition for the parents' attention (Bentovin & Kinston, 1991). The triangle that usually develops in a family relationship is not necessarily dysfunctional. It becomes dysfunctional when the level of anxiety within the emotional system is too high (Prest & Protinsky, 1993). Because of the state of chronic anxiety in the family, the family may seek to divert, or project the anxiety into one or more individuals in order to relieve family-level anxiety through the formation of a scapegoat (Larson & Wilson, 2001).

#### **2.10.8.1 Scapegoat**

Scapegoating occurs when a child is attacked as a source of problems because of bad behaviour (Levant, 1984). When anxiety escalates in a family system, one of the most common means of diffusing the tension is through an emotional triangle. Two people focus attention on a third person and a shift in attention reduces the tension. Triangling a third party prevents further differentiation as the focus shifts from the self to the triangled person (Labate et al, 1986). This approach is rife in the military, since the system disapproves confrontation; with the result that scapegoating becomes inevitable. This model is often carried home (Lagrone, 1978). The

returning father (F) may choose one of the elder sons(C) to channel his frustrations onto caused by his difficulty in attempting to fit into the family, a strategy which may also be adopted by the wife (M)(see Fig 4). However, some parents who developed close attachments with their children adopt different modes, such as overprotection.

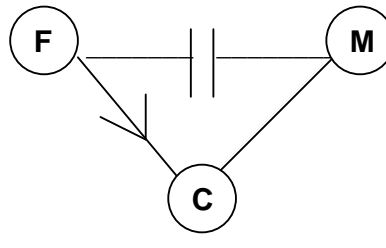


Figure 4: Scapegoat: adapted from Levant (1984).

#### 2.10.8.2 Overprotection

Overprotection is a process in which the parents define the child as sick or weak and then unite to protect him/her. The child's defiance will be overtly reinforced in order to diffuse parents' anxiety, which originates from their relationship with each other (Levant, 1984). In some cases this can be an attempt to get the father back in the family whereby a mother may distort or exaggerate a child's behaviour and may even overtly or covertly encourage delinquent behaviour (Lagrone, 1978). Fig 5 below illustrates overprotection, which may also be used as a strategy to equivocate problems facing the family. The returning parent from deployment may suppress his frustrations by paying exaggerated attention to a delinquent son, which will then prompt the mother to assist in seeking help for the child. This approach has the capacity to temporarily unite the family around the child (Minuchin & Fishman, 1981). In some families, parents triangulate around the child.

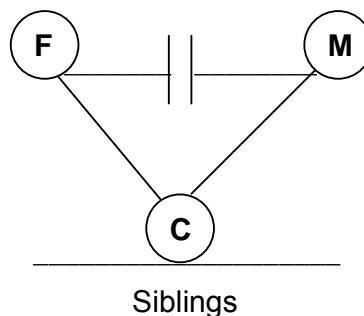


Figure 5: Overprotection: adapted from Levant (1984).

### 2.10.8.3 Triangulation

Triangulation describes the situation in which a child is caught in a bind in which loyalty to one parent means rejection of the other. Due to the parents' contradictory needs, such a child cannot satisfy and feel accepted by one parent without arousing displeasure or hostility in the other. This results in a tug of war in which parents compete to form coalition with a child in a struggle against each other (Levant, 1984). Fig 6 illustrates the process where a child is triangulated, used as a point of contention for parental differences. Either parent may demand that a child side with him/her against the other parent, creating intensive stress on a child. A poorly adjusted mother can on the return of the husband express her frustrations by requesting the child to side with her against the intruder who deserted them by going away on deployment.

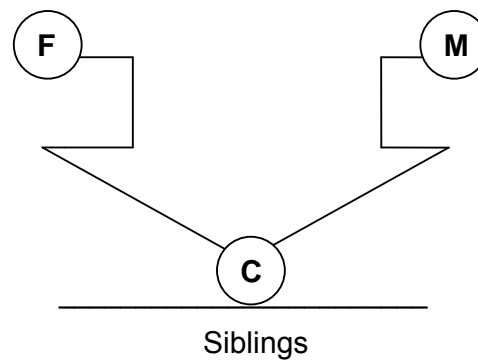


Figure 6: Triangulation: adapted from Levant (1984).

### 2.10.9 Effects of deployment on children

The effects of military deployments on children vary and depend on age. Young children and toddlers who can't put feelings into words regress in behaviour. Bed-wetting, using baby talk or climbing into a caregiver's lap for reassurance that someone is still there is a common phenomenon (Konitzer, 2008). On the study of Iraqi veterans' families, 61% of wives with children reported negative changes in their children's behaviour following their husband's departure. The effects included display of aggression (78%), bed-wetting (70%) and fixation with death (26 %) (Dandeker et al., 2006).



Separation from a parent also alters the development of children with respect to superego formation and object relations (Lagrone, 1978). Paternal absence occurring in the early years (formative years) is frequently associated with more detrimental consequences than when it occurs later. In a study of children whose parents were absent owing to military service, it was found that 59% of them were referred to a child guidance clinic for emotional disturbance. Such children had some period of extended paternal absence during the first five years of development (McCubbin & Dahl, 2000)(see par 2.10.8).

With increased age comes increased understanding and with that understanding comes fear. Fearing that a parent may forget about a child, become injured or not return from deployment is common. School age children may suffer from anxiety, perform poorly in school or voice physical complaints (Konitzer, 2008). Empirical studies examining the adjustment of military children show that this stage is characterised by fighting, defiance, anger, anxiety, sadness and school difficulties among military children with absent fathers (Kelley, 1994).

Older children may also face increased responsibilities at home, helping to fill the void left by the deployed parent (Konitzer, 2008). The mothers with adolescent boys may assign them some of their husband's duties (see par 2.10.1). This may result in parentalisation, which is described as a forced growth of a child as a result of being assigned parental duties (Van Breda, 1999). Some adolescents may feel bitter or angry and some may feel depressed. Some may be consumed by fear and others channel their emotions into rebellious and troublesome behaviours (Konitzer, 2008; Pierce, Vinokur & Buck, 1998). Other children may exaggerate negative role attributes with vengeance, developing behavioural problems and patterns of delinquency. Others may struggle intra-psychically and develop neurotic symptoms such as obsessions, compulsions, phobias and depressions (Labate et al., 1986). Women as involved participants in contemporary peacekeeping missions are facing peculiar challenges.

### **2.10.10 Effects of deployments on women**

The use of women in militaries such as the United States of America has existed for more than two decades. Since the end of male drafting in 1973 and the beginning of the all-volunteer force, the percentage of women in the military has increased from 1.6% in 1993 to 11.8% in 1995. In 1995, the United States military had about 200,000 women serving in active duty (Rosen, Durand, Bliese & Halverson, 1996). In July 2000, more than 53 000 Navy personnel were women (Kelley et al., 2001). In 1989, two women commanded army companies in the Panama invasion, with over 800 women participating. In 1983, 170 women participated in the invasion of Grenada (Cock, 1992). In the Gulf War, 40,000 members of the support force were women (Zwane, 1995; Cock, 1992; Cilliers, Schutte, Heinecken, Liebenberg & Sass, 1997).

South Africa ranks amongst the most progressive countries when it comes to gender policies in armed forces, as well as the number or percentage of women in defence. As such, women are found in all areas of SANDF employment (George, 2005). In 1995, there were 5,830 women in the SANDF (Molekane, 1995). They come from both statutory and non-statutory forces and cover all levels and functions in the SANDF (Zwane, 1995). In 1997, 18% of personnel were women (out of the total of 98 806 personnel (Cilliers et al., 1997).

The effects of job demands on women are more pronounced. One reason for this is the traditional gender role associated with the domains of work and family, with women viewed as bearing primary responsibility for home and family, with men as breadwinners (Brockwood, 2007). Despite the involvement in paid labour, women continue to hold major responsibility for the care of children, the household and their relationship with men (see par 2.4.1). Consequently, husband and/or children are purported to impede women's career progress (Gutek, Larwood & Stromberg 1991; Hertz & Marshall, 2001). This is because married mothers spend about 85 hours per week on a combination of work, household chores and child-care (Burden & Googins, 1987).

The situation is aggravated by the fact that job related separations often occur when children are still young and families have an increased need for time together. This is typically the period when responsibility for child-care and child socialisation falls mainly on mothers and when mothers are particularly concerned about attachment issues (see par 2.4.1) (Kelley et al., 1994). Women in the military identified deployment separation as the main cause of anxiety. Research examining operational stress also indicated that women were more symptomatic in the post-deployment phase than males. In congruence, a study on naval ships in the US indicated that women presented higher rates of mental disorders, stress adjustment reactions and sleeping disorders than men (Kelley, Hock, Bonney, Jarvis, Smith & Gaffney, 2001). This situation can be explained by the work and family conflict that pervade their deployment.

### **2.11 Work and family conflict**

Work and family conflict is defined as a form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect (Pieterse & Mostert, 2005, p.13; Hill et al., 2004, p.23; Huang, Hammer, Neal & Perrin, 2004, p.20; Cullen & Hammer, 2007, p.37; Carlson, Kacmar & Williams, 2000, p.35). That is participation in the family role is made more difficult by virtue of participation in the work role (Frone & Rice, 1987; Aycan & Eskin, 2005). This is in line with Marks' scarcity approach to work-family role's interplay on time, energy and commitment, which regards them as limited resources, the utilisation of which in one domain inhibits their utilisation in another domain (Lo & Ng, 2003).

The conflict emanates from the fact that family and work are the most important domains of life for most adults, with the vast majority of work activities and home activities performed in different places, at different times and with different associates (Clark, 2002; Fu & Shaffer, 2001; Huang et al., 2004; Kim & Ling, 2001). Usually, conflict between work and family life often manifests itself in excessive work-time demands, incompatible work schedules, fatigue and irritability caused by an individual's attempt to fulfil both roles (Eagle et al., 1997) (see par 2.4.1). The instrument that was used is Work and Family Conflict Scale consisting of 18 items developed by Frone et al. (1997) (see par 1.5.2).

The incompatibility mentioned above necessitates individuals to routinely negotiate the boundaries between those roles as they participate in their daily activities. This process of boundary negotiations can be frustrated by environmental factors that prevent the transition from occurring successfully (Clark, 2002). The list of models proposed to explain the interaction between family and work life includes spillover, compensation, segmentation, conflict, congruence, instrumental and integrative (Dilworth, 2004). For the purpose of this study, the focus will be on spillover and integration. The ease or difficulty of transitions between work and home is largely characterised by how segmented or integrated the two domains are (see par 2.4.1). Segmentation is described as the degree to which aspects of each domain (such as thoughts, concerns, and physical markers) are kept separate from one another. Integration, in contrast, represents the merging and blending of various aspects of work and home (Kreiner, 2006).

Traditionally, the belief was that what happens in the workplace is unrelated to what happens at the home front (Moelker & Van der Kloet, 2003). This prompted Kanter to argue in his separate-spheres model that work and family domains will not affect or conflict with one another (Stevens et al., 2007). That belief was referred to as the 'myth of separate worlds'. According to this belief, each domain is operated by its own laws and could be studied separately. That argument is equivocal and has been shattered by the empirical literature in this area. Numerous studies have demonstrated that what happens at work, both positive and negative, can and often does spill-over into the family domain and vice versa, giving credence to the integrative perspective (Brockwood, 2007).

An integrative perspective suggests that work and family life have become so intertwined that it is practically impossible to consider either domain in isolation from the other (Eagle et al., 1997). The relationship is dynamic and reciprocal. Not only do factors in the work sphere influence family lives, but family matters also have strong effects on work life. As a result, changes in the family must be examined in connection with what happens at work and vice versa (Haung et al., 2004). The traditional family with a full-time homemaker and a full-time breadwinner without domestic responsibilities is no longer a norm. The majority of employees also have domestic responsibilities (Odendaal & Roodt, 2002; Jolly, 1987).

Despite the foregoing argument, the organisation of work in the military remains based on the principle that commitment means uninterrupted, full-time, and even overtime attention for a span of decades (Gerson & Jacobs, 2001) (see par 2.6). This occurs despite the growing empirical evidence that boundaries between work life and family life are blurred as the behavioural and attitudinal norms of the workplace encroach on nonwork life and relationships (Hammer et al., 2004). The periodic permanent change of station, stationing of personnel overseas, and lack of control over duty assignments are some of the factors that can contribute to WFC (Pflanz, 2002). The situation is exacerbated by the incessant deployments that mark the 21<sup>st</sup> century military utilization (Britt & Dawson, 2005). The interference can particularly be in the form of time, strains, and behaviour. Such conflict exists under three conditions: the time needed for one role makes it difficult to devote sufficient time to other roles; the strain from one role makes it difficult to fulfil the requirements of other, and specific behaviours of one role makes it difficult to fulfil the requirements of the other (Elloy, 2004). Fig 7 below indicates the effects of the work on family.

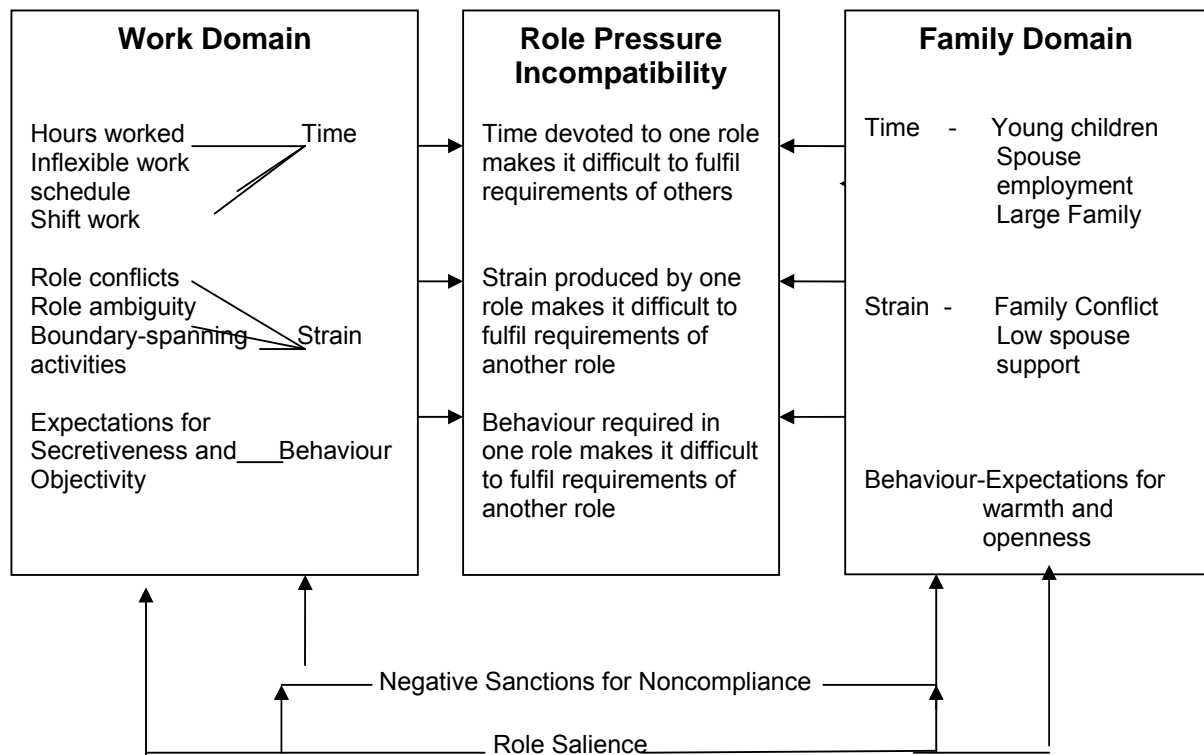


Figure 7: Sources of conflict between work and family roles: adapted from Greenhouse and Callanan(1994)

Figure 7 illustrates how role demands posed by the work domain (see par 2.6) and the family domain impinge on the ability of employees to perform optimally in either role. A work domain characterised by long hours, inflexible schedule and shift work combined with a family characterised by young children with an employed spouse and a large family makes it difficult to satisfy both domains concurrently. Furthermore, role conflicts, role ambiguity and boundary spanning activities from the work domain combined with family conflict and low spousal support creates a strain, which affects both domains negatively. In addition, the inherent behavioural expectations of secretiveness and objectivity are incompatible with family behavioural expectations of warmth and openness (see par 2.6 & par 2.4.1).

### **2.11.1 Time-Based Conflict**

Time-based conflict occurs when multiple roles simultaneously compete for a person's time, and the time spent in one activity precludes proper completion of other activities (Elloy, 2004; Lo & Ng, 2003; Fu & Shaffer, 2001). Time-based conflict is the most common type of WFC. Life roles compete for a precious commodity called time. The time spent in one role cannot be devoted to another role (Greenhouse & Callanan, 1994; Adamset al., 2005) (see par 2.4.1 & par 2.6). Excessive work time has long been seen as a major culprit affecting work and family balance. Heavy workload outside the home can interfere with individuals' marital role obligations and alter marital behaviour by reducing the amount of time and energy available to spend (Schulz, Cowan, Cowan & Brennan, 2004)(see par 2.6). Out-of town business meetings or late evenings at the office can conflict with the family dinners and children's parent-teacher conferences (Greenhouse & Callanan, 1994). The number of hours spent weekly in work activities has been shown to have a positive relationship with WFC (Beauregard, 2006).

Time-based conflict is likely to be most prevalent for employees who work long hours, travel extensively, frequently work overtime and have inflexible work schedules like in the military (Greenhouse & Callanan, 1994: Elloy, 2004)(see par 2.7). Fu and Shaffer (2001) examined the influence of work specific determinants of WFC among staff members in Hong Kong, finding that role-overload and hours spent on paid work influenced the amount of WFC experienced (see par 2.6).

Employees who experience the most extensive WFC tend to be married, have young children, have large families and have spouses who hold responsible jobs (see Fig 7). These family characteristics increase the amount of time required to fulfil family role requirements, which can interfere with work-related activities (Greenhouse & Callanan, 1994; Schreuder & Theron, 2004) (see par 2.4.1).

In the military, including the SANDF, occupational demands are expected to take precedence over family and personal considerations. Such work demands (see par 2.6) distract the worker from family roles (see par 2.4.1) and responsibilities, creating stress-promoting WFC (Matthews, Conger & Wickrama, 1996). In the study by Moelker and Van der Kloet (2003) on soldiers in the Netherlands, sixteen percent of spouses were not able to attend to family activities because of the obligations related to the soldier's job. Time pressure, which is usually measured by the number of hours worked and schedule flexibility, was cited as the culprit (Kim & Ling, 2001).

### **2.11.2 Role overload**

Role overload arises when an individual has numerous social roles to carry out, at least one of which requires excessive time commitment (Schreuder & Theron, 2004). Work overload is pronounced when demands exceed one's resources and may either be qualitative (where a task is too difficult to complete) or quantitative (when there are too many tasks that need to be done). In the work environment, career progression usually implies significant demands in terms of working hours, strong commitment and other work practices which are corporate conveniences rather than accommodating for a normal family schedule. While these two sets of overload may be independent, they are often reciprocally related (Elloy, 2004; Thompson et al., 2005). Past research has shown that long hours worked and work schedule inflexibility is related to high WFC and stress (Kim & Ling, 2001; Menaghan, 1991). Van Breda (2002) found that in the SANDF, women who deploy experience role overload, a demanding job, demanding marriage and childcare, which spill over into violence towards children. As a result of multiple role demands, strain may develop which can result in strain-based conflict.

### 2.11.3 Strain-based conflict

Strain is defined as an individual's cognitive, emotional and behavioural response to stress (Westman & Eden, 1992:24; Griffith & Vaitkus, 1999, p.12). Karasek(1990) described strain as the combination of high psychological demands and low decision latitude. Psychological demands refer to the quantity of work, the mental requirements and the time constraints. Decision latitude refers to the ability to make decisions about one's own work, the possibility of being creative and using and developing skills (see par 2.7).The job-strain-model emphasises that high psychological demands are not great sources of strain if they are combined with high decision latitude (Schnall, Belkic, Landsbergis & Baker, 2000; Rau, 2004)(see par 2.7).

Strain-based conflict exists when strain in one role affects performance in another role (Schreuder & Theron, 2004). Strain-based conflict may be the product of work or home stressors, which can lead to stress symptoms such as tension, anxiety, fatigue, depression, and irritability (see Fig 7). It is difficult to be an attentive spouse or loving parent when one is depressed or irritable. Strain-based conflict is likely to be intense for employees who experience conflict or ambiguity within the work role, who are exposed to extensive physical, emotional, or mental work demands, whose work environment is constantly changing, or who work on repetitive and boring tasks (Greenhouse & Callanan, 1994).

The militaries' contemporary roles are complex and different from traditional roles. They include maintaining presence, guarding sensitive sites, patrolling areas, engaging in crowd control and operating checkpoints (Adler at al., 2005). Other work-related challenges related to deployment include boredom, long working days and cultural deprivation (Ippolito et al., 2005). In addition, shift work, unplanned overtime, danger, exposure to suffering and death and emotional spill-over from work are considered common stressors that can impinge directly and indirectly on family life through stress (Clark, 2002) (see par 2.6). This may cause employees to feel trapped in an environment in which dedication to work, not the family is the only way to advance in their jobs and provide for their families (Kim & Ling, 2001). In peacekeeping missions soldiers function in an environment providing low decision



latitude coupled with high job demands in the form of workloads and time pressures (see par 2.6). This has been shown to lead to mental strain and cardiovascular disease, particularly when social support is low (Hammer et al., 2004; Bridger et al., 2007; Karasek et al., 1998) (see par 2.6 & par 2.10).

The studies show that a major predictor of strain in the military is work-role related dissatisfaction or distress. This relationship could be explained by the belief that various work-role characteristics produce distress in an individual and the resulting strain can undermine an individual's ability or willingness to meet the obligations of the other roles (Frone et al., 1997). Consequently, the soldier can carry home negative moods caused by the stressors at work which affect the family life. Thus, a soldier who is physically exhausted from a heavy workload or stressful working conditions may lack the physical and emotional energy required to fulfil family roles, or may arrive at home depressed, anxious, or hostile (Matthews et al., 1996)(see par 2.4.1). Sources of strain-based conflict tend to centre on the work rather than on the organizational environment, and are linked to role ambiguity (see par 2.11.4) and low levels of social support from organizational sources (Fu & Shaffer, 2001; Elloy, 2004) (see par 2.8).

In peacekeeping missions, the traumatizing events military personnel are exposed to create another strain that influence their ability to fit in and perform in their families after reunion (Adler et al., 2005). This strain is contagious, affecting the other spouse in the family. Westman, Vinokur, Hamilton and Roziner (2004) concurs that the strain experienced by one person affects the level of strain in another person in the same social environment.

#### **2.11.4 Role ambiguity**

Role ambiguity occurs when behavioural or performance expectations of a role are not clearly articulated (Thompson et al., 2005). In the family, boundaries determine who does and does not participate in the family and in what roles do they participate. Separation can create boundary ambiguity, a situation in which family members become unclear about which roles each member plays (Van Breda, 1997). The biggest challenge facing military families with deploying members is role ambiguity

following the deployment of a member (Drummet et al., 2003)(see par 2.4.1). Families must reorganise their daily routines so that they can function without the physical presence of the deployed member (Huebner, Mancini, Wilcox, Grass & Grass, 2007). The family will have to decide whether to symbolically keep the deployed member in or out (Van Breda, 1997) (see par 2.4.3).

A physically absent family member who is psychologically present can disrupt family functioning if the family is unable to make decisions and solve problems without his/her input. The goal of families experiencing separation is to stretch family boundaries enough to retain psychologically the military service member as a viable family member, while temporarily reassigning that person's responsibilities to others (Drummet et al., 2003) (see para 2.4.1). At an emotional level, ambiguity is evidenced by thoughts of safety and harm. The family of a deployed member know (s)he is in harm's way, but at the same time cannot know how close to conflict they are, especially when the enemy is the belligerents(Huebner et al.,2007).

In the work environment, role ambiguity is also experienced through the lack of clarity on the expectations of soldiers. From the situational perspective, the only certainty about the deployment of a service member in the contemporary security context is uncertainty from beginning to end (Huebner et al., 2007).The commencement of the mission is usually sudden and unexpected, time is insufficient for personnel to really understand the struggle occurring in the local area and to appreciate the mission's purpose (Shigemura & Nomura, 2002). This uncertainty may start when families begin to wonder about if-or when-their husband/father's or wife/mother's unit will be mobilised and then deployed. Although families are almost always given a date for when a unit will be deployed, this often changes. It is not uncommon for families to accompany their deploying member to the send-off point only to find out that the date has been changed, causing families to repeat their whole goodbye ritual (Huebner et al., 2007).

In the mission area, one major stressor is the uncertainty associated with getting to know peers and leaders (Shigemura & Nomura, 2002).The contingent usually consists of members and leaders from different units hastily assembled for a particular mission. In addition, peacekeepers usually have an ambiguous mandate,

which enjoins them to maintain presence to reduce the likelihood of resumed fighting between former warring factions. This presence can include guarding sensitive sites, patrolling areas, engaging in crowd control and operating checkpoints (Adler et al., 2005). Furthermore, the objective of the mission may change during the deployment according to the changing political situation and UN policy and the length of stay is uncertain (Shigemura & Nomura, 2002). The soldiers may also be expected to keep a low profile, acting as purely peacemakers and in the next minute, they can be involved in an intense battle in order to enforce peace (Van Dyk, 1998).

The members of the SANDF deployed in Burundi were also given an ambiguous mandate. They were expected to participate in disarmament, demobilisation and reintegration and security sector reform, providing security during the 2004 elections and the final demobilisation of the last rebel group (Boshoff, 2009). In Mozambique, the SANDF members played a supportive role in electoral support, in Rwanda, humanitarian assistance, in Mozambique, mine clearance, and other roles such as preventive deployments and securing the delivery of humanitarian aid (Kritzing, 2005). Such ambiguous mandates create uncertainty in the soldiers, resulting in considerable stress. Kirkland, Halverson and Bliese (1996) found that interventions with ambiguous objectives make it difficult for soldiers to develop clear attitudes about the values underlying a campaign.

Owing to ambiguous mandates, peacekeepers are often confronted and humiliated by civilians and parties to the conflict, attacked by civilians and militia and are sometimes viewed as an opposing force. They are expected to tolerate these challenges since the rules of engagement often restrict them from retaliating or taking offensive actions (Lloyd & Van Dyk, 2007; Bruwer, 2003). This places a strain on soldiers by combining a potentially threatening situation with the task of self-control. The tension inherent in this balance between soldiers' aggressive or retaliatory impulses and forced nonreaction is termed the UN soldier-stress-syndrome. This leads to the clinical manifestation of helplessness that may result when a soldier's normal outlets of responding to provocation and threat is hindered (Adler et al., 2005). Those experiences are carried over to families, affecting the behavioural repertoire of soldiers.

Ambiguity in peacekeeping is also experienced on command structure. Different interpretations result in command-structure confusion, doubts about the value of the mission, an unclear end state and doubts concerning the significance of the mission (Lloyd & Van Dyk, 2007). This aggravates the inherent characteristics of the peacekeeping mission. Ambiguity was the principal stressor reported during Operation Restore Hope in Somalia. The soldiers felt that they failed to do something significant for the Somalis (Kirkland et al., 1996).

### **2.11.5 Behaviour-Based Conflict**

Behaviour-based conflict occurs when behavioural expectations of one source are incompatible with the expectations of another source. For example emotional restrictions at work are incompatible with the openness expected by family members (Fu & Shaffer, 2001; Elloy, 2004). In the work context, managers are expected to be self-reliant, aggressive, detached and objective, whereas family members expect the spouses and parents to be warm, nurturing, emotional and human in their relationships with them (see Fig 7 & par 2.4.1). If people cannot change behavioural patterns when they enter different roles, behaviour-based conflict is likely to ensue (Greenhaus & Callanan, 1994).

The military organizations are characterized by mindless drilling, shouting and bullying whereas the family members expect warmth and different behaviours (Stokes, 2007). Lagrone (1978) asserted that the military enjoins its members to practice military principles which are incompatible with family needs. The consequence of disobedience has deleterious career effects. In addition, the military instils regimentation, which is destructive, deadening the initiative and the ability to manage one's own affairs (see par 2.6). The frustrations of deployments under such conditions and the excruciating experience of seeing atrocities affects the emotions of the soldier, which may inhibit effective resumption of family responsibilities (Mowrer, 1999). The effects of WFC on a family are demonstrated in Fig 8.

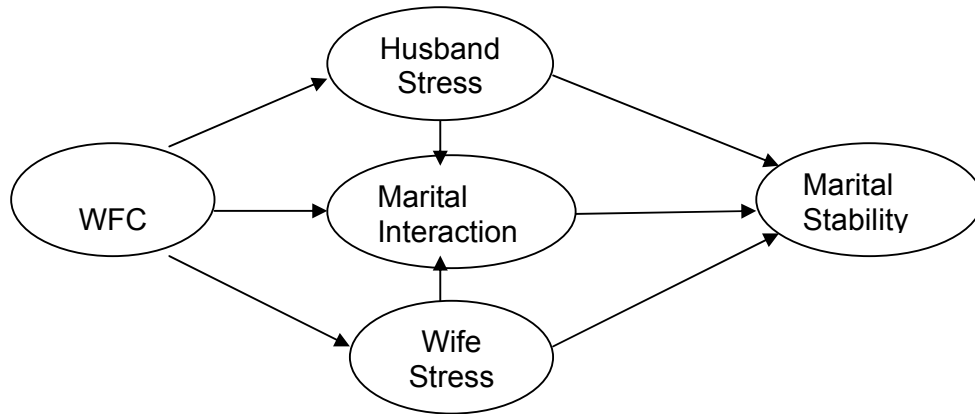


Figure 8: The relationship between WFC, marital interaction and marital stability (Matthews et al., 1996)

The above model, Fig 8, proposes that the adverse consequences of work-family conflict on marriage can be traced through this path. According to this path, WFC will increase the individual's level of psychological distress, which in turn is hypothesised to directly affect perceived marital stability (Matthews et al., 1996). This is the hypothesis shared by this research. Work and family conflict, as a source of stress, has been linked to many negative outcomes in both work and family life. For example, a number of studies have found that WFC has negative effects on job, family, and life satisfaction. Other outcomes associated with WFC include absenteeism, lateness to work, intention to quit one's job, as well as mental and physical health problems and substance abuse (Aycan & Eskin, 2005; Huang et al., 2004; Cullen & Hammer, 2007; Carlson et al., 2000; Britt & Dawson, 2005; Mesmer-Magnus & Viswesvaran, 2005). To summarise the antecedents and consequences of WFC, Fig 9 will be informative.

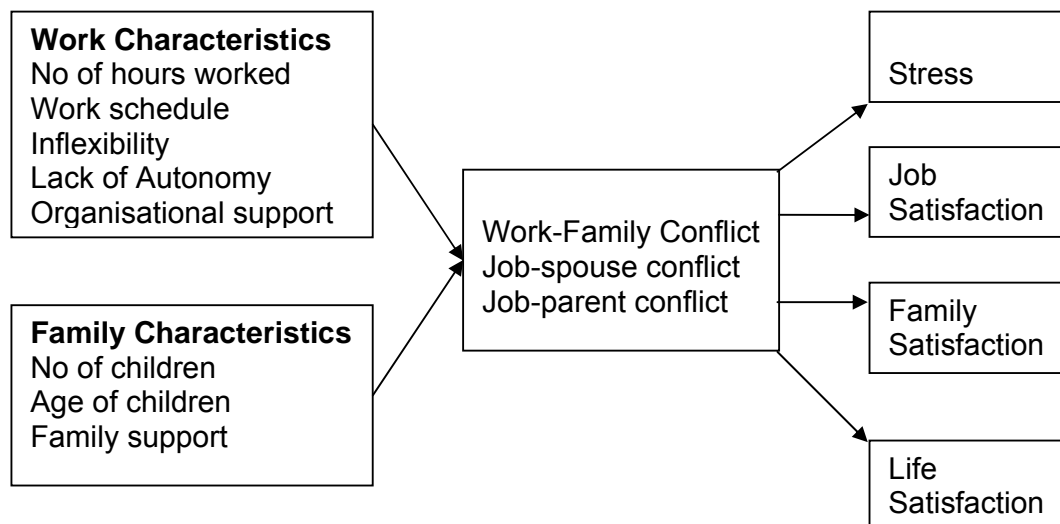


Figure 9: Framework of work-family conflict: adapted from Kim and Ling (2001).

Figure 9 illustrates that certain work characteristics and family characteristics predispose employees to WFC with resultant deleterious effects. The number of children, age of children and family support affect the time needed to effectively fulfil family roles (see par 2.7 & par 2.8). On the other hand, the number of hours worked, work schedule, inflexibility, lack of autonomy and organisational support are also determinants of the time needed to perform work responsibilities effectively. If family characteristics are such that more time is needed to perform effectively, combined with more time demanded by work environment, WFC will be inevitable. The conflict can manifest itself through job-spouse conflict and job parent conflict. Consequences of such conflict can include stress, job dissatisfaction, family dissatisfaction and life dissatisfaction. The effects are more pronounced on women.

#### 2.11.6 Gender and work and family conflict

The traditional division of labour is gender-based, with the wife responsible for the family and the husband assuming the breadwinner role. Despite the fact that women are now more educated, participate more in the workforce, and have more equal employment opportunities, evidence continues to suggest that women are still responsible for most of the family work (Fu & Shaffer, 2001) (see par 2.10.10). In the majority of studies examining gender, women have been found to experience high levels of both WFC and FWC. This may be due to the fact that women still spend

more total hours engaged in work and family activities than men, creating more opportunities for work and family activities to overlap (Beauregard, 2006). Furthermore, women are usually endowed with the responsibility of childcare and eldercare, which are time consuming activities (Kelley, 1994; Beauregard, 2006) (see par 2.4.1).

Kelley et al.(2002) found that women in dual-career couples reported greater role overload than men, and experience high levels of stress that is linked to marital strain. In addition, women experiencing deployments in the military reported more negative effects due to their traditional responsibility of childcare and strong normative commitments to their maternal roles. Kelley (1994) and Kelley et al.(2002) found that anxiety was higher among deploying women with children, and many of them expressed concerns regarding childcare in the event of mobilisation. Furthermore, in deployments, women were found to be more stress symptomatic than males. Most female soldiers deployed during Operation Desert Storm were diagnosed with psychiatric disorders than their male counterparts.

Eagle et al. (1997) found that women, because of home life responsibilities, have greater difficulties in resuming their emotion-based roles in their families (see par 2.4.1). Thompson et al.(2005) found that women experiencing a less pleasant work environment reported less family support and their role overload was associated with increased family conflict. The women reported feeling that both their children and their marriages were being short-changed and lamented organisational expectations. Nearly half of them said that they felt they had to sacrifice too much for their gains (Mackavey & Levin, 1998).

The situation necessitates social leadership, not just task leadership. Task leaders emphasize productivity, whereas social leaders concentrate on social cohesion. Thus if only task leadership alone operates, the organizational goals dominate and the impact on individual and family may not enter the equation (Howard et al., 2004) (see par 2.6).The survey of employers' attitude and an accompanying survey of employees' attitudes found that 94% of employers and 95% of employees agreed that people work best when they can balance their work and families (Brockwood, 2007).In response some organisations offer work-family options.

## **2.12 Challenges inherent in work-family options**

Work-family options offered by organizations also come with challenges. In a study conducted in US, workers who did not have flexible schedules (28%) indicated their willingness to trade other benefits and even change their jobs to get such control (Gersen & Jacobs, 2001) (see par 2.7). The available arrangements include working reduced hours, being able to work below the contracted hours, leaving work to look after a child and working from home. However, employees were found to be reluctant to take advantage of some of these measures lest it be perceived as a lack of commitment to their work (Brockwood, 2007).

In the United Kingdom (UK), the employers expressed numerous concerns that explained their reluctance to introduce flexible work arrangements. While companies are conscious of their potential benefits for the employees, they regard these as diffuse, difficult to quantify and outweighed by the administrative costs and disruptions caused to their operations. Employers are also concerned about setting a precedent, worrying that the general availability of such policies will “open the floodgates” to unlimited demands (Drew & Murtagh, 2005). Associated with this is a fear that some employees may take advantage of the policy and use it as an entitlement. Some employers raise concerns that when they adopt flexible work arrangements, it increases the pressure on other staff members to maintain their presence at work and deliver on targets. Furthermore, there is some evidence that this can lead to resentment, with those without children or other caring responsibilities believing that they make a bigger contribution than their counterparts (Drew & Murtagh, 2005).

Work-family options offered by organizations to assist those experiencing WFC are often construed by management as favours, granted to employees whose lifestyle choices impinge on their productivity. As such, these options are widely viewed by both employees and employers as a cost to the organisation and their use is associated with penalties such as lower performance appraisals and career limitations (Beauregard, 2006). In the study of 80 major US companies, less than 2% participated in work-family programs. This was attributed to the negative career consequences that followed such utilisation (Frye & Breaugh, 2004).



In the military, spouses are apprehensive to use programs available to them for fear of being classified as unable to handle their family problems (Nola, 2008). Most soldiers also express concern for the privacy of their records, which is a reality because their records are often available for review (Lagrone, 1978)(see par 2.6). The failure of work-family options to reduce the impact of relentless job demands and WFC on the ability to perform family roles inevitably result in stress.

### **2.13. Consequences of work and family conflict**

It is inevitable that the relentless nature of the demands posed by military organisations and families will result in conflict. The consequences affect soldiers on their daily functioning, permeating all facets of their lives. The consequences include stress, job satisfaction, marital satisfaction and life satisfaction.

#### **2.13.1 Stress on family members under conditions of stress**

Stress is defined as a psychological and physiological state that results when certain features of an individual's environment, called stressors, create discomfort, anxiety or the feeling of being overwhelmed (Gordon, 2002, p.305; Senol-Durak, Durak & Gencoz, 2006, p.158). Occupational stress, also known as job stress, has been defined as the experience of negative emotional states such as frustration, worry, anxiety and depression attributed to work related factors (De Nobile & McCormick, 2005, p.4). Stress is often used to describe the body's responses to demands placed upon it, whether these demands are favourable or unfavourable (Ahmadi & Alireza, 2007).

Job stressors include anything that a person finds threatening, including workload, constraints that interfere with work and prevent work from getting done, interpersonal conflicts among employees and uncertainty about what employees should be doing (Spector, 2002). Work stress has been implicated as an important health hazard for military personnel (see par 2.1). Nearly one in five military personnel blamed work stress for causing emotional distress and one in ten reported work stress to be severe enough to affect their emotional health (Pawar & Rathod, 2006). In the study by Ahmadi and Alireza (2007) on Iranian soldiers, the results

indicated that 60% reported suffering from occupational stress. Stressors experienced by deploying soldiers can be divided into psychological and physical stressors. In this study stress was measured with the Perceived Stress Scale (PSS) developed by Cohen, Kamarck & Mermelstein (1983)(see par 1.5.2).

### **2.13.1.1 Psychological stressors**

Deployments involve highly stressful incidents manifested in extended periods of compliance that represents chronic stress (Harris, Hancock & Harris, 2005). Geographic isolation from family pose another unique stressor that differs from those associated with other workplaces (Sanchez, Bray,Vincus & Bann,2004). The stress may occur before, during and after deployment (Rentz, Marshall, Loomis, Casteel, Martin & Gibbs, 2007).

Deployments from inception entail stressful changes in military units such as an increased number and intensity of training exercises, planning sessions, and equipment inspections (Bartone, 2006). Crew-members must often work long hours with little leave time in the weeks and months preceding the deployment (Kelley et al., 1994; Shigemura & Nomura, 2002). The planned leave for the family is sometimes cancelled (Dandeker et al., 2006). This is usually the result of role-overload (see par 2.11.2), role ambiguity (see par 2.11.4), conflicting job roles expectations (see par 2.11.5), and a lack of influence over the work environment (De Nobile & McCormick, 2005) (see par 2.7).

Frequent, sudden and prolonged separations, often associated with perilous duty under tense and potentially combative international relations represent special stressors faced by soldiers and their families (Eastman, Archer & Ball, 1990; Kelley, 1994; Leyva, 2003; Rosen & Moghadam, 2000; Moelker & Cloin, 1997; Bartone, 1996; Montalvo, 2000). As a result of deployment, family members may have to assume new roles thereby increasing their workload. The deployment also disrupts family routines (see par 2.3), creates uncertainty about the service member's safety and hinders the ability to plan for the future. On return, the reintegration into the family can be similarly stressful as relationships are renegotiated and roles redefined (Rentz et al.,2007) (see par 2.4.1).

In the peacekeeping mission area, stressors include role conflict, heavy workload (see par 2.11.2), isolation, mission ambiguity, uncertainty (see par 2.11.4) poor communication, sleep loss, lack of physical exercise and little recognition (Bartone, 1996). Lloyd and Van Dyk (2007) assert that the main cognitive stressor for peacekeepers relates to role conflict (see par 2.11.5). This emanates from the fact that soldiers are trained psychologically and technically to defeat enemies, which cause peacekeeping missions to demand a different mindset than that required for combat. In Haiti Operation Uphold Democracy mission, many soldiers saw the mission as pointless and unrelated to their military qualifications and stressful. Most expressed disillusionment because they did not think the activities of the military did anything to improve the situation of Haitians (Kirkland et al., 1996). This could be attributed to the bureaucratic structure characterising military operations. Few decision-makers on top make the decisions, leaving no discretion to forces on the ground (see par 2.7).

Exposure to injury, loss of life, damage and destruction of property are other stressors peacekeepers are faced with (Milgram et al., 1989). They frequently encounter death, overcrowding, dying people competing desperately for scarce resources, and a high level of disorganisation (Shigemura & Nomura, 2002). This produces greater psychological fallout than exposure to accidents or misfortunes of lesser magnitude and gravity. This relationship has been documented in victims of natural disasters such as floods, hurricanes, tornadoes, fires and in victims of manmade disasters such as civilians exposed to bombing and soldiers in combat (Kelley, 1994).

Another stressor experienced by peacekeepers is sense of powerlessness. Peacekeepers often feel powerless as they observe the suffering of the local population and have little means, as a result of a restrictive mandate to alleviate the suffering (Lloyd & Van Dyk, 2007; Shigemura & Nomura, 2002). Soldiers also witnesses civilian deaths and atrocities against locals (Bartone, 2006; Lloyd & Van Dyk, 2007). In Iraqi and Afghanistan the stressors experienced by peacekeepers included feeling helpless to alter the course of potentially lethal events, being exposed to severe combat in which colleagues were killed or injured, having personally killed enemy combatants and possibly innocent bystanders and being

exposed to uncontrollable and unpredictable life-threatening attacks such as ambushes or roadside bombs. Other stressors included post-combat exposure such as handling the remains of civilians, enemy soldiers or own forces. Other stressors include observing refugees, devastated communities and homes destroyed in combat (Friedman, 2006).

A lack of legitimacy is also faced by the soldiers. Perceived non-legitimacy of a deployment by family members can have long-lasting negative effects on deployed soldiers (Stafford & Grady, 2003). This was visible in Vietnam War veterans who experienced more pronounced post-traumatic disorders than their World War II counterparts who were seen as heroes (Binneveld, 1996). Kirkland et al. (1996) asserted that soldiers' main stressor in Vietnam was betrayal by their own leaders of the values they understood to be the moral foundation of war. From the very way the war was contested, no members of the society believed in its cause and legitimacy (Binneveld, 1996). Soldiers have a strong desire for acknowledgement and recognition as professionals who are contributing to an important mission (Bartone, 1996). Accordingly, most researchers found that most Vietnam veterans had high levels of stress, which spilled over to their families (Eastman et al., 1990).

During deployments soldiers find themselves confronting hostile and threatening civilian populations that are armed with boulders, metal bars, knives and firebombs (Milgram & Bar, 1993). The possibility that military members might be killed or injured on duty is always there (Lloyd & Van Dyk, 2007; Sanchez et al., 2004). Sometimes, the soldiers are being fired upon; rocks are thrown at them; they fall prey to shootings not directed at them, they are exposed verbal abuse and harassment by civilians, and they have to locate unexploded landmines and patrol mined areas (Lloyd & Van Dyk, 2007) (see par 2.6).

Soldiers are also exposed to the sights, sounds, and smells of dying men and women who are their colleagues (Friedman, 2006). Between 1948 and 1998, there have been more than 1559 deaths of peacekeepers (Shigemura & Nomura, 2002). The soldiers are nonetheless enjoined against using their own weapons, except as a last resort (Milgram & Bar, 1993). Consequently, soldiers can also experience combat exhaustion or stress, which is defined as the transient pathological reaction

of a basically healthy person to severe stress of combat (Kelley, 1994). Combat stress and exposure to trauma can produce both immediate and long-term mental health effects, including post-traumatic stress disorder (PTSD)(Solomon & Mikulincer, 1990; Noy, 1991).

#### **2.13.1.2 Post-traumatic stress disorder**

Many individuals exposed to severe trauma, such as former prisoners of war, torture victims and veterans develop post-traumatic stress disorder (PTSD) (Engdahl, Dikel, Eberly & Blank,1997). Military studies have shown that PTSD persists long after deployment is over (Shigemura & Nomura, 2002). Soldiers suffering from PTSD present symptoms such as nightmares, re-enactments and intrusive memories with associated feelings of guilt, fear and grief. When they are not feeling 'out of control' from those symptoms, they feel 'over-controlled 'by amnesia, denial, emotional numbing and detachment (Van der Hart, Brown & Van der Kolk,1995).

In a study of soldiers who participated in ground-combat operations in Iraq and Afghanistan, more than 90% of them reported being shot at and a high percentage of them reported handling dead bodies, knowing someone who was killed, or killing an enemy combatant (see par 2.6). Close to 90% of those exposed to those atrocities met the screening criteria for major depression and PTSD (Hoge,Castro, Messer, McGurk, Cotting & Koffman, 2004; Grieger, Cozza, Ursano, Hoge, Martinez, Engel & Wain, 2006). Kirkland et al. (1996) concur that continuous fear, fatigue and filth creates untenable stress on peacekeepers that can present symptoms after the operation is over. This was seen after the Gulf War with veterans showing PTSD symptoms for a considerable time afterwards (Shigemura & Nomura, 2002).

In the study conducted on Iraq War veterans, the prevalence of PTSD was 16.6% compared to a predeployment prevalence of 5% for a comparable group. Injuries were related to a higher rate of PTSD (Hoge, Castro, Messer, McGurk, Cotting & Koffman, 2004). The prevalence of PTSD increased in a linear manner with the number of fire fights during deployments: 4.5% for no firefights, 9.3% for one to two firefights, 12.7% for three to five fire fights and 19.3% for more than five fire fights

(Hoge et al., 2004). In addition, since the early 1980s there have been case reports detailing symptom increases and long-delayed PTSD onset among Holocaust survivors and soldiers from World War I, World War II and the Korean War. The reports indicate increased symptoms after a more recent trauma. In some cases, delayed PTSD was reported in previously asymptomatic individuals (Lindman, Engdahl & Frazier, 2001). The National Vietnam Veterans Readjustment Study found that 67% of high lifetime PTSD sufferers are veterans wounded in combat (Engdahl, et al., 1997). Peacekeeping soldiers are also subjected to physical stressors.

#### **2.13.1.3 Physical stressors**

In the case of physical and environmental stressors, the soldier has a certain range of adjustability and tolerance within which to operate without mobilizing the emergency systems and with no appreciable effect on performance. For example, human bodies are constantly making minor adjustments to temperature change through thermal regulating systems. Thus, the question is not whether a person can adjust, but rather the limits and the costs a person pays for adjustment to conditions that represent stress on these adaptive mechanisms (Landy, 1985).

A soldier in operations is faced with extreme hardship and deprivation, which wears away the inner resources to cope with other stressors. The physical stressors include dehydration in a hot climate, cold injury in cold damp weather, and physical exertion (Noy, 1991). Kellet (1985) found other challenges to include intense strain, deficient caloric intake, loss of sleep and strenuous physical exertion, which contribute to fatigue. Fatigue was found to have a detrimental effect on soldiers' performance, particularly commanders (Noy, 1991; Skelton, 1999). Other stressors include living in crowded and inhospitable conditions (Bartone, 1996). Fig 10 illustrates the relationship between stressors, strains and work outcomes.

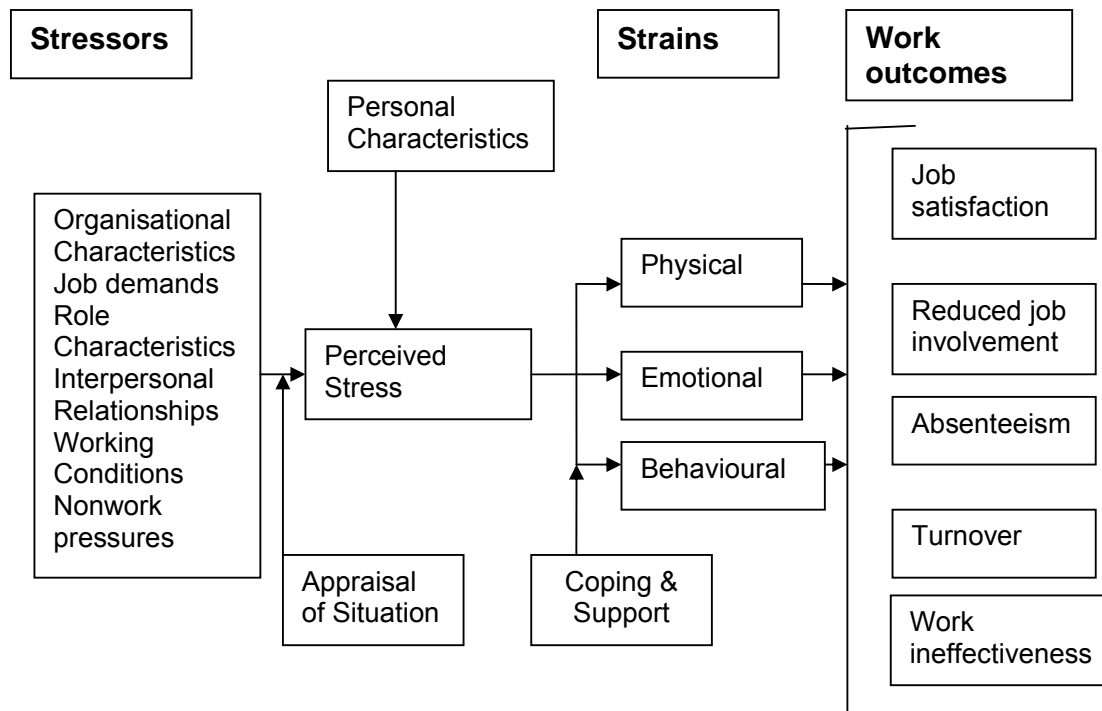


Figure 10: Job stress process: adapted from Greenhaus and Callanan(1994)

The model illustrates how stressors can create strains that can affect work outcomes. The stressors can be organisational characteristics, job demands, role characteristics, interpersonal relations, working conditions and non-work pressures which can result in physical, emotional and behavioural strains. The resultant strains can then affect important work attitudes such as job satisfaction, job involvement and behaviours such as absenteeism, and turnover, which will culminate into ineffective work performance. However, the effects of stressors are moderated by personal characteristics that can affect the perception of stress and the appraisal of the situation. The magnitude of strain will also be affected by the level of support (see par 2.8) and coping experienced by the person. The stress experienced by a person has consequences for the individual and the organisation.

#### 2.13.1.4 Consequences of stress

Stress emanating from WFC affects various facets of a soldier's life and results in negative consequences. On an individual level the stress has physical and behavioural consequences, which affects the soldier's wellbeing. Organisations are also affected by the existence of high stress levels, which affect performance.

The effects can be dire in military deployments since the safety of the soldiers and members in the host countries depends on individual soldier's ability to perform optimally.

#### **2.13.1.4.1 Physical consequences of stress**

Physical consequences of stress involve changes to normal bodily functioning such as hypertension, elevated blood pressure, dryness in the throat, nervous tics, stomach complaints, ulcers, myocardial infarction, neck and back pain, headache, migraine, tiredness, chest pain, heart disease and stroke (Schulz et al., 2004; Senol-Durak et al., 2006; Rau, 2004). This is attributed to the fact that tension arising from a long-standing emotional conflict can induce changes in bodily function which when repeated over a period of time, can lead to actual tissue damage (Ahmadi & Alireza, 2007). Other consequences include bad breath and dry mouth, eye ticks and muscle fatigue. Some people even find that their eyes bulge from the stress that overstimulates the thyroid glands (Friedman, 2006). Stress also aggravates existing cases of rheumatoid arthritis (Friedman, 2006). Furthermore, if an individual experiences considerable stress, there will be an associated nervousness, which may have an effect on decision-making (Henning, 1986).

#### **2.13.1.4.2 Behavioural consequences of stress**

The behavioural consequences of stress are the actions of individuals under high levels of stress. These may arise directly from stress or as a result of the psychological or physical reactions described above. The major behavioural consequences identified in the literature include reduced performance, deteriorating interpersonal relations, substance abuse and accidents (Landy, 1985; Spector, 2002; Henning, 1986). Immediate effects of combat include the combat stress reaction, which is characterised by overwhelming anxiety, withdrawal and impairment of functioning (Newby, 2005).

Considerable research indicates that individuals who are psychologically distressed are more likely to be hostile and irritable in their interactions with others, including family members (Matthews et al., 1996). Crossover studies suggest that work stress



negatively affects family relationships, for example, marital quality, and quality of relationships with children (Thompson et al., 2005). In a study of male military police officers, job stress was negatively associated with marital interactions with one's spouse, which was a precursor for marital stress and potential dissolution (Brockwood, 2007). As a result of stress, husbands are generally more likely to withdraw emotionally and behaviourally from marital interactions, whereas wives are more likely to be verbally confronting, critical and conflict engaging (Schulz et al., 2004). The results of a qualitative study in the military police corroborated these findings, indicating that work stress was linked to problematic family relationships, especially reduced quality of partner relationships (Kelley, 1994).

#### **2.13.1.4.3 Organisational consequences of stress**

The stress on individual soldiers during operations can also be detrimental to the individual soldier, the military unit and the mission (Reger & Moore, 2006). Consequences of stress in military operations include the increase in the risk of death, serious injuries from accidents, inattentiveness, errors of judgement, exposure (cold injuries), friendly fire incidents, and suicide. The stressors can also increase the risk of soldier misconduct, alcohol abuse and violations of the rules of engagement (Bartone, 1996). Brockwood(2007) also found an increased rate of absenteeism on soldiers with high levels of stress.

According to the 2002 American Department of Defence Report, service members who reported higher levels of stress at work also reported high level of stress in families. Those individuals also reported losses in job productivity which suggests a significant reduction in mission readiness (Jones, Perkins, Cook, & Ong,2008). Ahmadi and Alireza(2007)concur that life stress is an important factor which have serious effects on performance. Other strains include job dissatisfaction, depression, anxiety, irritability, somatic complaints, emotional exhaustion, depersonalisation, job boredom and workload dissatisfaction (Fenlason & Beehr, 1994; Hansen & Gardner, 2007).

There is consensus about the considerable loss due to the effects of stress on organisationally valued outcomes such as job satisfaction, and job performance.

Estimates of stress-related costs to the US economy reported in dollars were over 10% of the Gross National Product in 1992 (Sullivan & Bhaghat, 1992; Senol-Durak et al., 2006). In Australia, the costs of workers' compensation claims for stress-related mental disorders are estimated to exceed \$200 million every year (Hansen & Gardner, 2007). These costs emanates from manifestations such as absenteeism, increased conflict, increased medical usage, increased accidents, lower morale and increased workforce turnover (Pflanz, 2006). In the US, stress-related incidents costs businesses more than \$150 billion per year because of the same reasons (Spector, 2002).

In the military, analyses have shown that stressors such as role ambiguity (see par 2.11.4), role conflict and role overload (see par 2.11.4 & par 2.11.2) have differing strengths of relationships with job satisfaction, though the direction of the relationships is generally negative (De Nobile & McCormick, 2005; Sullivan & Bhagat, 1992). Some soldiers that are unable to tolerate stressors caused by routine deployments develop psychosocial problems, which impair their combat readiness (Van Breda, 1999). The US military has generated and funded family stress research because of the concern that stressful home-life, whether related to the unique pressures of being imbedded in the military subculture or due to non-military-related factors can have a distracting or disturbing impact on its personnel performance (Malia, 2007). Stress is not the only consequence of WFC but job satisfaction is also negatively affected.

### **2.13.2 Job satisfaction**

Job satisfaction is a construct defined differently by different scholars. The term was first defined by Hoppock in 1935 as a combination of psychological, physical and environmental circumstances that causes a person to say, 'I am satisfied with my job' (Yew, 2006, p.28). Job satisfaction is an individual's cognitive and affective evaluation of overall quality of the job (Voydanoff, 2005). Job satisfaction is also described as a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences (Barling, Iverson & Kelloway, 2003; De Nobile & McCormick, 2005; Faragher & Cooper, 2005; Connolly & Viswesvaran, 2000; Hoole & Vermeulen, 2003; Landy, 1985). It is the result of one's evaluation of his job or his

job experience by comparing what he expects from his job and what he actually gets from it (De Nobile & McCormick, 2005; Yew, 2006; Yang et al., 2008). The instrument that was used to measure the construct in the current study is Minnesota Satisfaction Questionnaire developed by Weiss et al.(1967)(see par 1.5.2).

Traditionally, Hoppock perceived job satisfaction as a result of various factors in the working environment and if these factors were present, job satisfaction would arise. The factors included pay, nature of work, supervision, promotional opportunities and relations with co-workers (Hole & Vermeulen, 2003). In contrast, Sempene et al. (2002) viewed working conditions like clear staffing policies, clear channels of communication, staff participation in decision-making, security and good governance as having effects on job satisfaction. The same factors were understood to affect both job satisfaction and job dissatisfaction. Herzberg concurred with Hoppock that factors like work environment, pay and company policies eliminate job dissatisfaction and coined them hygiene factors or maintenance factors while the factors that can create job satisfaction like challenging work, responsibility, recognition and achievement as motivators (Yew, 2006; Hersey & Blanchard, 1982).

Managers in contemporary organisations place great importance on the issue of job satisfaction for their employees. Among leaders, job satisfaction is often considered an important influence on employee behaviour, and ultimately, organisational effectiveness (Hirschfeld, 2000; Yang et al., 2008). Spangenberg and Theron (2004) assert that employee satisfaction represents a barometer of the extent to which an organisational unit succeeds in establishing the requirements for effective performance. This is because employees who are satisfied are more likely to be committed to their organisation. Such workers are more likely to take pride in organisational membership, believe in the goals and values of the organisation and exhibit higher levels of performance and productivity (Yew, 2006). Organisational success was found to be directly proportional to job satisfaction of the employees. This could be attributed to the fact that individuals were found to participate in the organisations in order to meet and realise their personal needs and support the aims of the organisation as long as it serves to their aims (Erdem, Rahman, Avci, Goktas, Senoglu & Firat, 2008).

Job satisfaction in the military may be unique because of the inherent stress and compensation associated with the work environment. The two strongest predictors of job satisfaction among personnel in the US military were found to be the perception of a relatively high level of job pressure and the belief that the biggest problems in one's life are the result of job related issues (Yang et al., 2008). Connolly and Viswesvaran (2000) concurred that determinants of job satisfaction include organisational constraints, WFC (see par 2.11) and work schedules.

Job satisfaction was found to impact on employee behaviours such as complaints and grievances, frequent labour unrest and absenteeism (Sempene et al., 2002; Erdem et al., 2008; De Nobile & McCormick, 2005; Hoole & Vermeulen, 2003; Sanchez et al., 2004). Job satisfaction also influences the morale and battle effectiveness of the military organisation. Furthermore, research has shown that military personnel who report greater job satisfaction are more likely to stay or to indicate the intention to stay (Yang et al., 2008).

Since job satisfaction involves employees affectively, it has major consequences on their lives. Kim and Ling (2001) found that when the job makes it difficult to meet one's family commitments, one will be less satisfied with the job. The most common consequences for employees include the effects on physical health and longevity, mental health and the impact on the employees' social life in general. De Nobile and McCormick (2005) also found that job dissatisfaction is linked to frustration, aggression, psychological withdrawal, poor physical health, shortened life span, mental health problems, lower overall life satisfaction and reduced marital satisfaction. WFC was also found to negatively affect marital satisfaction.

### **2.13.3 Marital satisfaction**

Marital satisfaction is described as the global evaluation of the state of one's marriage or current long-term romantic relationship. This global evaluation can be a reflection of how happy people are in their marriage in general or a composite of satisfaction with several specific facets of the marital relationship (Brockwood, 2007; Voydanoff, 2005). The scope of marital satisfaction includes cooperation, flexibility, and compromise in working out mutually gratifying, productive ways of living

together and meeting the commitments of marriage and family (Milgram & Bar, 1993). Marital satisfaction was measured with the Comprehensive Marital Satisfaction Scale (CMSS) developed by Mehrabian (2005). The instrument measures the quality of interaction of the spouses and the extent to which their values match (see par 1.5.2).

Employment can have a negative effect on employees' marital relationships, as the job may hamper them from spending time with their families. In the study of female soldiers in Singapore, lower levels of marital happiness were found to be related to higher levels of WFC (Kim & Ling, 2001)(see par 2.11). Family separation as an unavoidable component of military life has been found to be stressful to military families. Logically, it would be expected to observe reduced marital satisfaction on soldiers who were deployed and possibly after they had returned (Schumm, Bell & Gade, 2000).

The effect of spending time together as a family on marital satisfaction was highlighted by the studies of recreation and leisure benefits for families. The results indicate that husbands and wives who share leisure time together and participate in joint recreational activities are more satisfied with their marriages than those who do not (see par 2.5). This relationship has proved consistent in other studies from Australia, England and Korea (Zabriskie & McCormick, 2001). Presser (2000) concurs that pleasurable shared time is a marriage-specific capital that discourages divorce. Her study of leisure time use in relation to marital dissolution five years later supports the contention. The perceived quality of marriage is a strong predictor of the stability in the marriage (Brockwood, 2007). However, the military deployments (long-term deployments particularly) result in chronic disengagement (see par 2.4.3) in the family and threaten marital satisfaction (Van Breda, 1999) (see par 2.3). The effects of WFC are not only limited to marital satisfaction but also affect life satisfaction negatively.

#### **2.13.4 Life satisfaction**

Life satisfaction is described as a global assessment of a person's quality of life according to his chosen criteria. Judgement of satisfaction is dependent on a comparison of a person's circumstances with what is thought to be an appropriate standard. Judgement of how satisfied people are with their present state of affairs is based on comparison with the standard, which each individual sets for him/herself but is not externally imposed (Diener et al., 1985). Many aspects of a person's life will affect their overall life satisfaction and generally, a person's job and family form a major part of his/her life. Thus, job satisfaction and marital satisfaction are expected to have a positive relationship with a person's life satisfaction. The instrument that will be used in the current study encapsulates both important aspects of a person's life, family and work, Satisfaction with Life Scale (SWLS) developed by Diener et al. (1995) (see par 1.5.2).

Satisfaction with lifestyle, which is part of life satisfaction, refers to the degree to which the spouses are pleased with the social arrangement of their marriage (see par 2.5). Included under this heading are satisfaction with the number of children, their employment, the degree of supportive interaction the couple has in the community and their socioeconomic level (Wallace & Wallace, 1985). According to Litwack and Koster (1981), the military profession threatens life satisfaction of its members and families through loss and isolation. The more subtle form of loss is loss of support from the spouse brought about by deployments (see par 2.6).

Isolation as a result of deployment, keeps a prominent member in the family system away from his/her family. This affects the health and well-being of military personnel which forms part of their assessment of quality of life, affecting the effectiveness of military operations. This reality was acknowledged by the British Armed Forces and prompted the organisational leadership to invest in family welfare and to make sure that any problems are addressed to prevent negative effects on operational capability (Dandeker et al., 2006). That assumption was confirmed by study results of Strachan and Burgess (1998) who found that employees' life satisfaction have an impact on job performance.

In a study of Korean War veterans, there was a significantly lower percentage of life satisfaction compared to similar aged Australian veterans. These outcomes were mostly strongly associated with severity of combat exposure (see par 2.6) and lack of support from the organisation (Ikin, Sim, McKenzie, Horsely, Wilson, Harrex, Moore, Jelfs, & Henderson, 2009)(see par 2.8). In order to address that deficiency in the SANDF, Van Breda and Potgieter (2002) and Van Breda (1999) recommended to the organisational leadership to make support networks active and mandatory in all deploying units. Failure to effectively manage organisational factors impinging on life satisfaction is understandably likely to hinder overall job performance.

### **2.13.5 Job performance**

Job performance is described as the extent to which the employee completes the task successfully (Landy, 1985). However, certain jobs are inherently complicated, necessitating job performance to be reduced to task performance. Task performance is defined as the effectiveness with which job incumbents perform activities that contribute to the organisation's technical core either directly by implementing a part of its technological process or indirectly by providing it with needed materials or services (Borman & Motowildo, 1993, p.23). To fully capture the extent to which soldiers are performing their jobs, a Basic Task Performance Scale developed by Borman and Motowildo(1993) was used in this research(see par 1.5.2).

The unpredictable environment in which the military operations are conducted demands more than basic task performance. This is necessitated by the fact that leaders cannot fully foresee all contingencies or fully anticipate activities that they may need the soldiers to perform (see par 2.6) (Ishak, 2005). In peacekeeping missions this need is pronounced by the complexity and the precarious nature of the mission. Organisational Citizenship Behaviours (OCBs) are behaviours that are discretionary, performed by employees that help in organisational performance. OCBs include helping co-workers with work related problems, not complaining about trivial problems, behaving courteously to co-workers and speaking approvingly about the organisation to outsiders. Those intangibles are not explicitly required by the job but are critical to the organisation's effectiveness in accomplishing the mission (Pflanz, 2006).

Such behaviours promise long term organisational success because they are purported to improve organisational efficiency, effectiveness and adaptability (Ishak, 2005). Soldiers not motivated and unwilling to perform under such circumstance are likely to engage in withdrawal behaviours. The Organisational Citizenship Behaviours Scale developed by Podsakoff, MacKenzie, Moorman and Fetter (1990) was used in this research (see par 1.5.2).

Employees who are struggling to balance work and family responsibilities will experience stress and find it difficult to work to their full potential (Strachan & Burgess, 1998). In a study of Gulf War veterans, the deployment period was associated with increased drug and alcohol abuse from soldiers intended to alleviate stress (see par 2.13.1) or to aid sleep, thereby threatening preparedness of the soldiers (Federman, Bray & Kroutkil, 2000). In another two-year study conducted in the US Army, soldiers who reported stress also reported losses in job productivity, which suggested a significant reduction in mission readiness (Jones et al., 2008).

Van Breda(1999) found that some members who were dissatisfied with deployments decided to quit the SANDF. Heitman (2005) concur that as a result of high deployment tempo, some members of the SANDF, in addition to looking for employment in other organisations, also attempt to evade deployments. Kelley et al.(2001) also found that most female veterans that gave birth after their involvement in Gulf War indicated their intention to quit aimed at preserving their families. Dandeker et al. (2006) also found that the spouses of Gulf War veterans who felt that the military was inconsiderate encouraged their spouses to leave the military, which is costly to the organisation. In 2004, the estimated cost of recruiting, screening and training for basic skills was \$20,000 per person (Sanchez et al., 2004).

Due to the critical importance of the military to operate seamlessly it is necessary to minimise time and costs associated with training new personnel and to capitalise on the experience of seasoned personnel. Studies have generally found that increased quality and satisfaction with the couple's relationship enhance work outcomes and improve the connections between families and work (see par 2.11), and reduce the intention to quit (Stevens et al., 2007). As a result of family breakdowns caused by



deployments, some soldiers often have to be returned home, posing various financial, human and operational risks to the deployment (Van Breda, 2008). The deleterious effects are not only confined to the work environment but spill-over to the family, affecting its stability.

#### **2.13.6 Family stability**

Family stability refers to the family's capacity to function as a continuing group with commitment on the part of its members (Bentovin & Kinston, 1991). It refers to consistency, responsibility and security in family interactions (Amoateng, 2004). Johnson, Amaloza and Booth (1992, p.37) define stability as the extent to which the individual maintains the same position relative to others on an attribute over time. A stable family system is the one in which adults marry and live with their spouses in their own households and in which children are born into and raised in such households (Farley & Hermalin, 1991) (see par 2.5).

Family stability is also described as the interaction patterns within the overall family system that characterise both daily time use and the celebration of special events. Such system qualities provide regularity and facilitate the effective utilisation of family time and energy by providing rhythmic patterns to family interactions. In turn, regularity in daily family time and routines decreases the need for decision making each time tasks arises, which increases stability and predictability in family life (Henry, 1994). The construct will be measured with the Family Adaptation Scale developed by Moos and Moos (1983) in the current research. The instrument measures the way family members relate to each other following deployment (see par 1.5.2).

The value of family stability emanates from the importance of the family in societies. Family as an institution is a fundamental unit of human life in which the most intimate communal life takes place. In families, people engage in the most intimate relationships, share responsibilities and participate in various forms of social activities (Lee et al., 2002). South Africa is one of the most family-oriented societies. Despite the devastating effects of poverty and labour migration, most people still find a family living arrangement as appropriate (Amoateng, 2004).

Stable families are homeostatic (see par 2.5) and are viewed as a set of interrelated parts wherein a change in one part of the system affects the rest of the system. Their primary aim is to achieve individuality of each member within the togetherness of the family system as a whole (Prest & Protinsky, 1993). Members of such families are committed and appreciate one another, have good communication and problem-solving ability (Schaneveldt & Young, 1992; Palmer, Freeman & Zabriskie, 2007). Members also listen to each other, believe in each other, take each other's needs into consideration and act in ways beneficial to others in the family (Parker, 2001). Such families can cope with stress and problems in an efficient and effective way. They have and use coping resources both from within and from outside the family and have the ability to end up being more cohesive, more flexible and more satisfied as a result of effectively overcoming stress and problems (Krysan, 1990). Thus within a stable family there is enough inner resources to enable it to pull itself together in time of crisis or disequilibrium (see par 2.5) (Adams et al, 2005).

On the psychological level, depending on the nature of a deployment, PTSD (see par 2.13.1.2) can be one of the residues of deployment. The stressors of operational conditions can threaten the status of veterans as nurturing, emotionally stable husbands and fathers. On their return, they may display impatience, emotional volatility and numbed responsiveness to others and experience traumatic flashbacks and nightmares (Elder et al., 1994). This was experienced by Vietnam veterans who, after their homecoming, the repression mechanism started to slacken, with the resultant recurrence of war-related experiences, hindering effectiveness in the family (Binneveld, 1996) (see par 2.13.1.2).

Similarly, Operation Just Cause veterans that lasted only 48 hours followed similar patterns of dysfunction. Some soldiers kept weapons within reach after returning to the US (Kirkland et al., 1996). Iraq and Afghanistan veterans also faced similar psychological challenges that affected their ability to function in their families. Some found it difficult to shift away from an adaptive, continuous, combat-ready, hyper vigilant state. They found it difficult to settle into quiet domesticity (Friedman, 2006). In a US military study, three out of four military wives reported that the family strain that triggered divorce was associated with their husbands' temporary inability to recuperate after deployment (Henning, 1986; Wallace & Wallace, 1985).

In congruence, Schumm et al. (2000) also found marital instability to be common among soldiers who deployed in Sinai Peninsula from October 1994 to July 1995.

Other soldiers, including SANDF members, express their frustration through violence. Over 50% of male and female employees reported knowing at least one veteran who abuses his partner. An additional 20% of soldiers reported knowing more than ten soldiers who abuse their partners and more than ten women who are abused by their partners (Van Breda, 2002). Consequences include abusive relationships, broken relationships, repeated arrests and institutionalisations (Van der Hart et al., 1995). This could be partially attributed to the soldiers practices on deployments as articulated by Binneveld(1996). Binneveld(1996)'s research results with respect to US soldiers returning from deployment indicated that more than 50.9% of servicemen had smoked marijuana on operations and 10,000 servicemen were prosecuted for the use of hard drugs. Consequently, some families break down completely due to deployments (Van Breda, 1995). The findings of the study conducted on Vietnam War veterans and Israeli veterans of the Lebanon war corroborated that combat exposure and exposure to abusive violence contributed to higher rates of family disintegration, culminating into divorces among veterans (Malia, 2007).

From a systemic framework, the high divorce rate in military families derives from emotional distance between the spouses, which leads to resentment between them which makes it difficult to work together as parents (see par 2.4.1). With the sense of imminent family break-up, stability is only maintained at the cost of severely dysfunctional interactions (Montovin & Kingston, 1991). A mother may begin to experience closeness within her relationship with a child rather than with the husband (see par 2.4.4), and the father may focus his energy on his job, hobbies and the other child (Rothbaum, Rosen, Ujiie & Uchida, 2002; Mowrer, 1999). Because of the state of chronic anxiety in the family, the family may seek to divert, or project the anxiety onto one or more individuals in order to relieve family-level anxiety through the creation of scapegoat (Larson & Wilson, 2001).

## 2.14 Chapter summary

To fully capture the impact of deployments on family stability, a systems framework is used to highlight the important components of the family. The functioning of the family was discussed using the cohesive structure of the family as departure point. This was followed by the discussion of the nature of demands posed by the military in a form of deployments. The South African experiences with respect to deployments were discussed, followed by the discussion of the impact of deployment separation on family boundaries. Like in most organisations, the effects of deployments on women were discussed.

Job autonomy and support that are known to have an ameliorative effect on high job demands were discussed. The consequent WFC that emanates from the incompatible job demands and family demands was discussed. The aggravated effects on women, as major role players in the family domains, despite their paid labour involvement, were then discussed. In an attempt to mitigate the effects of the incompatibility between work and family roles, other organisations employ certain measures, which are not always successful. That challenges plaguing such attempts were discussed. This was followed by the discussion of the inevitable stress that result from the inability to manage the demands posed by two most important life domains, family and work. The deleterious effects of stress were discussed, including physical, behavioural and organisational.

Job satisfaction as another facet of life affected by WFC was discussed, focusing on its influence on the individual and on the organisation. Marital satisfaction was also discussed, articulating how it is affected by job demands. The overall life satisfaction as consisting of various aspects in one's life was discussed, including how the family stability and job performance are affected. Job performance as the focus of many organisations was discussed, detailing how job demands, WFC, marital satisfaction and life satisfaction affect it. Lastly, family stability as the casualty of the above interactions was discussed. The methods that families' use in an attempt to diffuse their dysfunctional family systems was also discussed. Lastly, children as the helpless victims were also discussed, focusing on how they are drawn into the parental conflict and the consequent effect on their own growth and development.

## CHAPTER 3

### RESEARCH DESIGN AND METHODOLOGY

#### 3.1 Introduction

The insight emanating from literature review (chapt 2) will form the foundation of the hypotheses that will be outlined in this chapter. Furthermore, the research design, sample, measuring instruments and statistical analysis will be discussed.

#### 3.2 A proposed structural model

In accordance with the literature overview, a structural model is hypothesised to establish the influence of deployments, operationalised as job demands on family stability. The proposed paths between the dimensions of job demands and family stability are founded on the following reasoning and literature support.

According to Moos and Moos (1983, p. 51), family cohesion is defined as the extent to which family members are concerned and committed to the family and are helpful and supportive to each other. Attributes of such families include commitment to and appreciation for each other, togetherness, good communication and problem solving ability (Schaneveldt & Young, 1992). Such families need sufficient time together to enhance nurturing and care, using opportunities of leisure time to increase communication and interaction (Palmer et al., 2001). They are however vulnerable to long-term separation that are imposed by work environment such as long working hours and distal locations that affect the practical aspects of combining work and family (Brockwood, 2007). It is therefore hypothesised that there is a negative causal relationship between family cohesion and WFC.

Matthews et al.(1996) assert that work demands may interfere with the rhythm of family life, disrupting the amount of time a worker can spend with the family. The military organisations are through deployments, displaying characteristics of total institutions, requiring exclusive time and energy from their members (Adler et al.,

2005). Deployment is described as the movement of forces within areas of operations, the positioning of forces into formations for battle and the relocation of forces and material to desired areas of operations (Adler et al., 2005). This implies that deploying family members will be temporarily inhibited from performing their family roles. Accordingly, it is hypothesised that there will be a positive causal relationship between job demands and WFC.

Work-family-conflict is a form of inter-role conflict in which the role pressures from the work and family domains are incompatible in some respect (Britt & Dawson, 2005). High job demands in a form of workloads and time pressures have been shown to lead to mental strain, cardiovascular disease and stress (Hammer et al., 2004). It is therefore hypothesised that there will be a positive causal relationship between WFC and stress.

The effects of WFC are not only restricted to stress, but other factors as well. Job satisfaction is one such factor, defined as a pleasurable emotional state resulting from the appraisal of one's job or job experiences (Faragher & Cooper, 2005). Job satisfaction as a result of an evaluation of one's job is likely to be affected by the high level of demands, which can culminate into dissatisfaction (De Nobile & McCormick, 2005). It is therefore hypothesised that there will be a negative causal relationship between WFC and job satisfaction.

Marital satisfaction is another factor that is negatively affected by WFC. Employment was found to have a negative effect on employees' marital relationships since the job may deprive soldiers of time to spend with their families (Kim & Ling, 2001). It is therefore hypothesised that there is a negative causal relationship between WFC and marital satisfaction.

Life satisfaction is also a facet of life affected negatively by WFC. This is due to the fact that a person's job and family form a major part of their life. WFC was found to prevent a person from fulfilling both work role and family role well, with the consequent low level of life satisfaction (Kim & Ling, 2001). It is then hypothesised that there is a negative causal relationship between WFC and life satisfaction.

As work role requirements may inhibit the ability to meet family responsibilities, the individual will experience stress (Van Breda, 1995). Negative relationship between stress and self-reported performance has been found fairly consistent (Westman & Eden, 1992). Responses to stress in the workplace can take the form of both physiological and psychological reactions. One such reaction is a 'flight' response used by employees' as a coping mechanism. There is abundant evidence supporting the withdrawal hypothesis, indicating that employees use absence and tardiness as manifestations of negative responses to organisational factors (Dwyer & Ganster, 1991). Van Breda (1999) found that most soldiers discover later that they are unable to tolerate the stress caused by deployment, thereby reducing the combat readiness of the unit and the morale. The loss of personnel who have been trained for combat is a loss the organisations cannot afford. It is therefore hypothesised that there will be a negative causal relationship between stress and job performance.

An integrative or identity perspective suggest that work and family life have become so intertwined that it is practically impossible to consider either domain in isolation from the other (Eagle et al.,1997). The relationship between work and family is dynamic and reciprocal implying that not only do factors in the work sphere influence family lives, but family matters also have strong effects on work life. As a result, changes in the family must be examined in connection with what happens at work and vice versa (Kim & Ling, 2001). It is then hypothesised that there is a positive causal relationship between job satisfaction and family stability.

Studies have found that overall job satisfaction and work aspects tend to show the strongest relationships with the attendance behaviour, such that low satisfaction with the more intrinsic aspects of work is predictive of absenteeism (Dwyer & Ganster, 1991). Job avoidance is an immediate reaction to dissatisfaction that substitutes for exits. Employees performing acts of alternative withdrawal would thus not quit because the alternative acts help them adjust to job frustrations (Hom & Kinicki, 2001). It is therefore hypothesised that there is a positive causal relationship between job satisfaction and job performance.

Farley and Hermalin (1991) assert that adults cannot maintain a stable family unless they marry and live with their spouses. Deployments tend to accelerate, delay and undermine marriages as a result of residual stress that accumulates during deployments (Pavalko & Elder, 1990). Call and Teachman (1996) used Vietnam veterans in their study and found that military operations separations and intense combat experience create stress that increases marital instability. It is therefore hypothesised that there is a negative causal relationship between stress and family stability.

Marriage is seen by many as a source of normalcy and stability to buffer the aftershock of stressful events (Call & Teachman, 1991). Family stability is determined by how successful the family arrangement is in meeting the demands of each member for love, companionship, understanding, sympathy and emotional expression. The family is the locale for release from the formal constraints imposed by the external world. It is a retreat to which the individual may withdraw from the formalities of the work environment (Mowrer, 1999). Mathews et al., (1996) asserted that the quality of one's marriage is a strong predictor of the stability of the marriage. It is then hypothesised that there is a positive causal relationship between marital satisfaction and family stability.

People who experience many challenges in their marriage also tend to find their military roles difficult, tend to feel unsupported by other members of the unit and experience greater anxiety (Van Breda, 1995). It is then hypothesised that there is a positive causal relationship between marital satisfaction and job performance.

The literature of life domain approach to evaluate quality of life found that overall quality of life was related to organisational outcomes (Wilcove et al., 2003). It is hypothesised that there is positive causal relationship between life satisfaction and job performance.

Family studies found that people experiencing life satisfaction are also likely to contribute to stable families due to their propensity to engage in emotional disclosure and more compliance with the family expectations (Henry, 1994). It is



then hypothesised that there is a positive causal relationship between life satisfaction and family stability.

Work and family cannot be considered separate entities, and what happens to a person in the course of working is determined by the larger setting in which work takes place. Tensions in one domain are inevitably transferred to the other (Elloy, 2004). When conflicts between these two domains occur, there are adverse consequences for individuals, families and organisations (Fu & Shaffer, 2000). If work-related problems interfere with the completion of personal or family related obligations, these unfulfilled home obligations will interfere with day-to-day functioning at work, and visa versa (Beauregard, 2006). As these feeling accumulate and intensify, the individual's own behavioural repertoire becomes inflexible, less nuanced, and less positive. This cognitive schema will then be brought to the family system, inhibiting its effective functioning (Menaghan, 1991). It is then hypothesised that there is a positive causal relationship between job performance and family stability.

The preceding literature review and hypotheses culminated into a structural model that displays a schematic representation of hypotheses that have been constructed as an answer to the research problem (the stability of families under conditions of deployment). Fig 11 portrays the structural model that describes the relationship between deployments, operationalised as job demands and family stability.

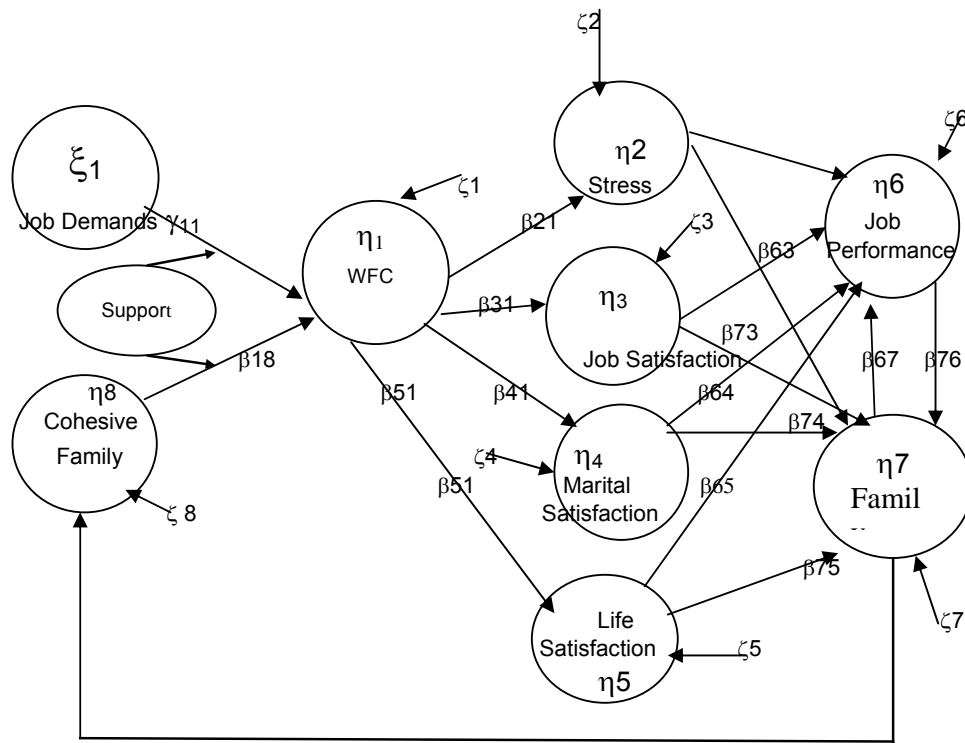


Figure 11: Proposed model of factors influencing stability in families experiencing deployments

### 3.3 Statistical hypotheses

The ideal in this research will be to find an exact fit, which means the model explains perfectly the covariance between the indicator variables in the population of interest. In LISREL, the following null hypothesis of exact model fit will be tested.

Null hypothesis ( $H_0$ ) exact fit: Root mean square error of approximation (RMSEA) = 0

Alternative hypothesis ( $H_a$ ) exact fit: RMSEA > 0

However, exact fit is not possible; therefore, one has to settle for close fit. In LISREL, the null hypothesis of close fit will be tested. Therefore, if the difference between the observed and reproduced score is smaller than 0.05, it is close fit and if bigger, it is not.

$H_0$  close fit: RMSEA  $\leq 0.05$

$H_a$  close fit: RMSEA > 0.05

In addition to the overall fit hypothesis, the following specific path coefficient hypothesis will be formulated and tested if the model fits the data well.

Hypothesis 1: A high level of job demands has a significantly positive influence on work and family conflict (WFC).

H01:  $\gamma_{11} = 0$

Ha1:  $\gamma_{11} > 0$

Hypothesis 2: A high level of family cohesion has a significantly positive influence on WFC.

H02:  $\beta_{87} = 0$

Ha2:  $\beta_{87} > 0$

Hypothesis 3: A high level of work and family conflict has a significantly positive effect on stress.

H03:  $\beta_{21} = 0$

Ha3:  $\beta_{21} > 0$

Hypothesis 4: A high level of work and family conflict has a significantly negative effect on job satisfaction.

H04:  $\beta_{31} = 0$

Ha4:  $\beta_{31} < 0$

Hypothesis 5: A high level of work and family conflict has a significantly negative effect on marital satisfaction.

H05:  $\beta_{41} = 0$

Ha5:  $\beta_{41} < 0$

Hypothesis 6: A high level of work and family conflict has a significantly negative effect on life satisfaction.

H06:  $\beta_{51}=0$

Ha6:  $\beta_{51}<0$

Hypothesis 7: A high level of stress has a significantly negative effect on job performance.

H07:  $\beta_{62}=0$

Ha7:  $\beta_{62}<0$

Hypothesis 8: A high level of stress has a significantly negative effect on family stability.

H08:  $\beta_{72}=0$

Ha8:  $\beta_{72}<0$

Hypothesis 9: A high level of job satisfaction has a significantly positive effect on job performance.

H09:  $\beta_{63}=0$

Ha9:  $\beta_{63}>0$

Hypothesis 10: A high level of job satisfaction has a significantly positive effect on family stability.

H010:  $\beta_{73}=0$

Ha10:  $\beta_{73}>0$

Hypothesis 11: A high level of marital satisfaction has a significantly positive effect on job performance.

H011:  $\beta_{64}=0$

Ha11:  $\beta_{64}>0$

Hypothesis 12: A high level of marital satisfaction has a significantly positive effect on family stability.

H012:  $\beta_{74}=0$

Ha12:  $\beta_{74}>0$

Hypothesis 13: A high level of life satisfaction has a significantly positive effect on job performance.

H013:  $\beta_{65}=0$

Ha13:  $\beta_{65}>0$

Hypothesis 14: A high level of life satisfaction has a significantly positive effect on family stability.

H014:  $\beta_{75}=0$

Ha14:  $\beta_{75}>0$

Hypothesis 15: A high level of family stability has a significantly positive effect on job performance.

H015:  $\beta_{67}=0$

Ha15:  $\beta_{67}>0$

Hypothesis 16: A high level of job performance has a significantly positive effect on family stability.

H016:  $\beta_{76}=0$

Ha16:  $\beta_{76}>0$

Hypothesis 17: A high level of family stability has a significantly positive effect on family cohesion.

H017:  $\beta_{87}=0$

Ha17:  $\beta_{87}>0$

### **3.4 Research design**

Research design is described as a set of guidelines and instructions to be followed in addressing the research problem (Mouton, 1996; Kerlinger, 1986). To empirically investigate the hypothesis that variance in family stability can be explained in terms of the job demands, required a strategy to try to ensure empirical evidence that can be interpreted unambiguously for or against the operational hypotheses. The study is explanatory with the aim to indicate causality between variables or events (Babbie & Mouton, 2004).

An ex-post facto correlation design is used in this study. Ex-post facto research is a form of systematic empirical enquiry in which the scientist does not have the direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulatable. Inferences about relations among variables are made without direct intervention, from concomitant variation of independent and dependent variables (Kerlinger & Lee, 2000; Johnson, 2001).

### **3.5 Sampling**

A population is described as a collection of objects, events or individuals having some common characteristics that the researcher is interested in studying. Sampling frame is the set of all cases from which the sample will actually be selected (Mouton, 1996). In this case, the frame was the units that are deploying for long periods (period longer than five months). A sample would be considered representative to the extent to which it provides an accurate portrayal of the characteristics of the target population (Babbie & Mouton, 2004). To investigate the research-initiating question on how job demands in the form of deployments influence the stability of the family, the target population was married or members in significant long-term intimate relationships who have been exposed to deployments.

For the purpose of this study, the target population was members of the SANDF assigned to deployment units. The military units used were 4 South African Infantry Battalion (4 SAI), 101 Air Supply Unit, 2 SAI BN, and 10 SAI BN. The reason for the selection of these units is due to their speciality as infantry units that lead to their significant involvement in external deployments. The Navy, Air Force and South African Military Health services are used in support roles, constituting an insignificant number in deployments. The authority was sought in advance from Defence Intelligence Countermeasures Division to conduct research, after which the permission from the Officers Commanding was secured. Ethical clearance was also sought and received from the University of Stellenbosch Ethics Committee and from the ethics committee in the SANDF. Director Psychology from the SANDF granted the permission from the ethics perspective to continue with a research.

The participants were invited to the Unit Halls where the researcher administered the questionnaires, after which he collected them. A total of 380 questionnaires were administered and only 368 were returned completed. This represents a 98% response rate, which is indicative of good response. Babbie and Mouton (2004) assert that a response rate of 50% is adequate for analysis and reporting. The sample included both males and females, although men still outnumbered women in those units. This could be explained by the patriarchal nature of the organisation and its male-oriented culture.

Determining the correct sample size is critical for power analysis purposes, especially the determination of both Type I and Type II errors. The MacCullum, Browne and Sugawara (1996) tables indicate that a sample size of 296 subjects is required to ensure a 0,80 probability of correctly rejecting an incorrect model with 36 degrees of freedom, if the probability of a type I error in testing the null hypothesis of exact fit is fixed at 0,05 [i.e.,  $P(\text{reject } H_0: \text{RMSEA}=0 | \text{RMSEA}=0,05)$ ]. The tables further indicate that a sample size of 274 subjects is required to ensure a 0,80 probability of not rejecting a correct model with 36 degrees of freedom, if the probability of a Type II error in testing the null hypothesis of close fit is fixed at 0,05 [i.e.,  $P(\text{reject } H_0: \text{RMSEA}=0,05 | \text{RMSEA}=0,08)$ ] (MacCullum et al., 1996).

To fully capture the diverse workforce in the military, probability sampling was intended to be used. Probability refers to the mathematical chance of an event occurring. Stratified systematic sampling as a subcategory of probability sampling was applied to capture various homogenous subgroups of interest, as defined by rank (seniority), gender and race. Stratified sampling is a method used for obtaining a greater degree of representativeness, thereby decreasing the probability of sampling error (Babbie & Mouton, 2004). However, due to unforeseen circumstances, some members on the list were not available, implying that the stratified systematic was not possible. This resulted in settling for a convenient sample that was deployed and available in the units. Therefore, the study cannot claim to have sampled a representative sample of soldiers experiencing deployment.

### **3.6 Measuring instruments**

The research questionnaire consists of 2 sections, with the first section, Section A requesting the biographic data of the respondent. The information entails age, gender, race, highest school qualification, rank, marital status, number of dependents and number of deployments. Section B consists of subscales measuring various variables (see par 1.5.2).

#### **3.6.1. The Demand-Control Questionnaire**

The Demand-Control Questionnaire is a 20-item instrument developed by Karasek (1990). It consists of a Likert type scale with 1=never, 2=almost never, 3=sometimes, 4=fairly often and 5=often. The instrument is designed to establish the extent to which the job is perceived to pose high demands (see par 2.6) and the magnitude of control and support experienced by the employees (see par 2.7 & par 2.8). The instrument was used to determine the extent to which job demands are overwhelming, therefore affecting the ability to perform other life roles. The reliability of the scale is 0.79.



### 3.6.2 Family Adaptability and Cohesion Evaluation Scales

Family cohesion was measured with Family Adaptability and Cohesion Evaluation Scales (FACES IV) developed by Olson et al (2004). A 10-item short version of the scale was used. FACES IV consist of a Likert type scale with 1=never, 2=almost never, 3=sometimes, 4=fairly often and 5=often. FACES IV assesses the extent to which the family members are cohesive and the family is structurally balanced (see par 2.5). FACES IV was used to highlight how high job demands impinge on a structurally balanced family. The reliability of the scale is 0.93.

### 3.6.3 Work and Family Conflict Scale

The incompatibility between job demands in a form of deployments and family obligations was measured with Work and Family Conflict Scale developed by Frone et al.(1997)(see par 2.11). An 18-item short version of the scale was used. The scale consist of a Likert type scale with 1=never, 2=almost never, 3=sometimes, 4=fairly often and 5=often. The scale was used to delineate the extent to which the competing job demands and family responsibility are in conflict. Scale reliability for work-family conflict was 0.91.

### 3.6.4 Perceived Stress Scale

Perceived Stress Scale (PSS) was used to assess the extent to which the military family member experienced work-family-conflict emanating from deployment as stressful. Perceived Stress Scale is a 14-item scale developed by Cohen et al.(1983)(see par 2.13.1). The scale consist of a Likert type scale with 1=never, 2=almost never, 3=sometimes, 4=fairly often and 5=often. The reliability of the scale is 0.80.

### 3.6.5 Minnesota Satisfaction Questionnaire

Minnesota Satisfaction Questionnaire (MSQ) was used to measure the extent to which the challenges emanating from the family and job demands affect job satisfaction. The MSQ is a 20-item scale developed by Weiss et al.(1967)(see par

2.13.2). The scale consist of a Likert type scale with 1=never, 2=almost never, 3=sometimes, 4=fairly often and 5=often. The reliability of the scale is 0.80.

### 3.6.6 Comprehensive Marital Satisfaction Scale

Marriage is another factor that gets affected by the incompatibility between job demands and family demands. Comprehensive Marital Satisfaction Scale developed by Mehrabian (2005) was used to establish the extent to which deploying family member is still satisfied with his/her marriage (see par 2.14.3). The instrument is a 35-item Likert type scale with 1=never, 2=almost never, 3=sometimes, 4=fairly often and 5=often. The established reliability of the scale is 0.94.

### 3.6.7 Satisfaction with Life Scale

Since family and work constitute the important domains in people's lives, it is foreseeable that the incompatibility between those two variables would affect people's satisfaction with their lives. Satisfaction With Life Scale developed by Diener et al.(1985) was used to determine the extent to which people are still satisfied with their lives, despite the potential deleterious effects of deployments (see par 1.5.2).The instrument is a 5-item scale with 1=never, 2=almost never, 3=sometimes, 4=fairly often and 5=often. The established reliability of the scale is 0.87

### 3.6.8 Basic Task Performance Scale

The result of dissatisfaction with job and life has been demonstrated to affect job performance. To fully capture the extent to which job performance was affected, Basic Task Performance Scale developed by Borman and Motowildo (1993) was used. The instrument is an 11-item scale with 1=never, 2=almost never, 3=sometimes, 4=fairly often and 5=often. The reliability of the scale is 0.96.

### 3.6.9 Organisational Citizenship Behaviours Scale

The in-exhaustive nature of job description in operational environment makes organisational citizenship behaviours (OCBs) a necessity. The importance of including the measure of OCBs emanates from the changing nature of roles performed in peace missions. OCBs were measured to establish the extent to which such desirable behaviours are affected by deployments. OCBs were measured with Organisational Citizenship Scale developed by Podsakoff et al.(1990). An 8-item shortened version of the instrument was used, with 1=never, 2=almost never, 3=sometimes, 4=fairly often and 5=often. The instrument had a reliability of 0.94.

### 2.6.10 Family Environment Scale

Family stability is the culminating point of this study. To establish the extent to which all the variables triggered by deployment affect family stability, the Family Environment Scale developed by Moos and Moos (1983) was used (see par 2.13.6). The instrument is an 11-item scale with 1=never, 2=almost never, 3=sometimes, 4=fairly often and 5=often. The established reliability of the subscale is 0.80.

## 3.7 Statistical analysis

Structural Equation Modelling (SEM) was applied using LISREL 8.50 to do statistical analysis (Jöreskog & Sörbom, 1996). Each scale and sub-scale was item-analysed through SPSS reliability procedure to identify and eliminate items not contributing to the internal consistency of the scales and subscales. Confirmatory factor analyses on the scales was also performed using LISREL 8.50 for Windows. There is a general consensus that LISREL confirmatory factor analysis represents the most powerful and versatile approach to testing for sampling applications of measurement invariance. There are other additional advantages for using SEM.

SEM provides social science researchers with an opportunity to determine how well measures used to represent latent constructs reflect the intended construct in a more rigorous and parsimonious way than the techniques of exploratory factor

analysis traditionally employed, by enabling researchers to specify structural relationships among the indicator variables and the specific latent variables they are meant to reflect. SEM also assists the researchers in the use of complex predictive models by allowing for the testing and specification of these more complex path models as an entity in addition to testing the components comprising the model. SEM also provides for the estimation of the strength of the relationship that exists between latent variables, without being moderated by measurement error (Dunbar-Isaacson, 2006).

### **3.8 Chapter summary**

In this chapter, the proposed structural model and the relevant hypotheses were presented. Included is the research methodology to be used, an overview of the research design, sample and measuring instruments. Finally, the description of the statistical analysis was provided. The next chapter will present the results of the study.

## CHAPTER 4

### RESEARCH RESULTS

#### 4.1 Introduction

This chapter will discuss the challenges and solutions of missing values. That will be followed by the results of item and dimensionality analysis performed in order to establish the psychometric integrity of the indicator variables used to represent various latent variables. Thereafter, the results of the hypotheses are presented by reporting on correlations between the constructs and the results of the structural equation modelling. That will be followed by the evaluation of the univariate and multivariate normality of the indicator variables. The evaluation of the measurement model will be discussed which will be followed by the discussion of the structural model.

#### 4.2 Missing values

No matter how carefully social scientists plan their data collection when using survey methodologies, they will always be faced with missing data (Buhi, Goodson & Neilands, 2008). Incomplete data occupy a central place in social research. Almost every researcher has to deal with incomplete data from time to time and some have to deal with it on regular basis (Harel & Zhou, 2005). Thinking of the data set as a large matrix, the missing values are randomly distributed throughout the matrix (Acock, 2005). Missing values are part of the more general concept of coarsened data, which includes numbers that have been grouped, aggregated, rounded, censored or truncated, resulting in a partial loss of information (Schafer & Graham, 2002).

Schafer and Graham (2002) caution against statements such as 'missing values on a dependent variable can be safely ignored' holding such statements to be imprecise and generally false. That argument is supported by the fact that it is well established that men, individuals from minority groups, people with high incomes, those with little education, and people who are depressed or anxious are less likely

than their counterparts to answer every item in a questionnaire (Acock, 2005). Ignoring the missing data will then inhibit valid generalisations because such groups in the population will not be accounted for in the studies. To overcome such a challenge, Jöreskog, Sorböm, Du Toit and Du Toit (2000) assert that missing values in raw data may be handled through missing data techniques (MDT) such as pairwise deletion, list-wise deletion, and imputation based on matching.

#### **4.2.1 Deletion**

Among older methods for dealing with missing data, the most popular is to discard units whose information is incomplete. Case deletion, also commonly known as listwise deletion is one such method and is used by default in many statistical programs (Schafer & Graham, 2002). Also referred to as complete case analysis, it involves excluding from the analysis entire cases with missing values for any variable. For example, if each respondent fails to answer just one questionnaire item, the software package using listwise deletion would discard all the data and alert the analyst there are no valid cases (Acock, 2005; Buhi et al., 2008).

Furthermore, there are two additional potential problems with this method. First, listwise deletion results in a loss of statistical power or an inflation of type II error and can lead to biased estimates (Acock, 2005; Buhi et al., 2008; Theron, Spangenberg & Henning, 2004). Because this method includes only complete cases in the analysis, it can reduce sample size substantially and diminish analyst's ability to find statistically significant effects. Secondly, because survey takers may choose not to answer certain questions, completely eliminating these people from the analysis may introduce bias. In sum, data analysed using listwise deletion may not be generalisable to the larger population (Buhi et al., 2008).

Pairwise deletion is another form of deletion. It uses all available data for each variable to compute means and variances. When conducting correlational analysis, all available pairs of values are used. Thus due to varying response rates for different survey items, the resulting values of analyses are products of different subsets of the same sample (Buhi et al., 2008; Acock, 2005).

There are further two major weaknesses associated with pairwise deletion. First, due to differing numbers of observations used to estimate components of the covariation matrix, pairwise deletion can produce estimated covariance matrices that are implausible, such as estimating correlations outside the range of -1.0 to 1.0. Even if pairwise deletion produces the correlation values that appear plausible and fall within the range of -1.0 to 1.0, pairwise deletion may yield nonpositive definite correlation or covariance matrices, which can be problematic to LISREL.

The second weakness with this technique is similar to that of listwise deletion; diminishing of sample size thereby inflating the possibility of type II error. The last issue with pairwise deletion is that it is difficult to compute the degrees of freedom because different parts of the model have different samples. Selecting the sample size using the correlation that has the most observations would be a mistake and would exaggerate statistical power. Selecting the sample size using the correlations that has the fewest observations would reduce the statistical power (Acock, 2005; Theron et al., 2004).

#### **4.2.2 Means**

Many characteristics of interest to researchers cannot be reliably measured by a single item, so researchers may create a scale by averaging the responses to multiple items. An average can be motivated by the idea that the items are exchangeable, equally reliable measures of a unidimensional trait. The items are typically standardised to have a mean of zero and a standard deviation of one before averaging. If a participant has missing values for one or more items, it seems more reasonable to average items that remain rather than report a missing value for the entire scale (Schafer & Graham, 2002). The strength of this method is that, by replacing the missing value with an actual value, the analyst is able to increase the sample to its original size, solving the 'wasted data' issue created by using deletion methods. However while this strategy allows the inclusion of all cases in a standard analysis procedure, replacing missing values with a single value changes the distribution of that variable by decreasing the variance that is likely present (Buhi et al., 2008; Theron et al., 2004).

Averaging the available items is difficult to justify theoretically either from a sampling or likelihood perspective. Unlike case deletion, it may introduce bias under values missing completely at random. When this method is used the variance of the scale tends to increase because it becomes a mixture of the averages rather than the average of the scale. This method also raises fundamental conceptual difficulties. The scale has been redefined from the average of a given set of items to the average of the available items, a definition that now depends on the particular rates and patterns of nonresponse in the sample and that also varies from one participant to another (Schafer & Graham, 2002).

#### **4.2.3 Hot-deck**

Hot deck is a variant of the mean substitution technique described above. It involves replacing a respondent's missing values with a value from a similar respondent. A similar respondent is someone who shares the same patterns of response for a group of matching variables (Buhi et al., 2008). Hot deck refers to the computer cards matching of available responses to nonresponses (Harel & Zhou, 2005). Its major statistical weakness is the assumption that there are no differences between respondents and nonrespondents (Buhi et al., 2008).

#### **4.2.4 Single imputation**

Imputation refers to the process of substituting real values for missing values. The substitute values replaced for a case are derived from one or more other cases that have a similar response pattern over a set of matching variables. The ideal was found to be the use of matching variables that will not be utilised in the confirmatory factor analysis (Theron et al., 2004). Imputation has several desirable features. It is potentially more efficient than case deletion, because no units are sacrificed. Retaining the full sample helps prevent loss of power resulting from a diminished sample size. Moreover, if the observed data contain useful information for predicting the missing values, an imputation procedure can make use of this information and maintain high precision. On the negative side, imputation can be difficult to implement well, particularly in multivariate settings. Some ad hoc



imputation methods can distort data distributions and relationships (Schafer & Graham, 2002; Harel & Zhou, 2005).

#### **4.2.5 Multiple imputations**

Single imputation techniques such as mean substitution and hot deck imputation cannot account for the uncertainty introduced by imputing data for values that are missing. The goal of multiple imputations (MI) is to provide valid inferences in difficult situations in which the data is incomplete (Harel & Zhou, 2005). Representing a more sophisticated MDT, MI involves replacing the missing value with two or more imputed values. MI generates multiple data sets where the observed values are identical across the data sets, but imputed values vary in value. It is this variability from one imputed data set to another that enables a MI-based analysis to properly factor in the uncertainty involved in imputing missing values (Buhi et al., 2008).

MI retains much of the attractiveness of single imputation from a conditional distribution but also solves the problem of understating uncertainty (Schafer & Graham, 2002). A key advantage of MI is that once the imputed data sets are created, the researcher can use them in almost any type of analysis ranging from simple descriptive statistics through regression methods and complex multivariate statistical analysis (Buhi et al., 2008; Schafer & Graham, 2002). However, this procedure could not be used in this case because it assumes that the observed data has an underlying multivariate normal distribution, which in this case could not be ascertained (Theron et al., 2004).

#### **4.2.6 Imputation by matching**

In this study, missing values were imputed using the PRELIS 8.50 programme (Jöreskog & Sörbom, 2006). Imputation by matching was investigated as a possible solution to the problem of missing values in the model. Twenty-five items with three or less missing values were used as matching variables. Imputation by matching resulted in an effective sample of 359 from the original 368 cases with observations on all 152 items. Only 9 cases did not have values for all 152 items

after imputation and had to be eliminated. This constituted a minimal reduction in the original sample size than would have been retained through the use of either listwise or pairwise deletion methods. Below, Table 1 indicates the number of missing values per item.

Table 1: Missing values per item

<b>PS1</b>	<b>PS2</b>	<b>PS3</b>	<b>PS4</b>	<b>PS5</b>	<b>PS6</b>	<b>PS7</b>	<b>PS8</b>
3	5	3	6	4	5	22	6
<b>PS9</b>	<b>PS10</b>	<b>PS11</b>	<b>PS12</b>	<b>PS13</b>	<b>PS14</b>	<b>MS1</b>	<b>MS2</b>
4	2	5	2	8	2	1	4
<b>MS3</b>	<b>MS4</b>	<b>MS5</b>	<b>MS6</b>	<b>MS7</b>	<b>MS8</b>	<b>MS9</b>	<b>MS10</b>
2	3	3	2	2	1	0	2
<b>MS11</b>	<b>MS12</b>	<b>MS13</b>	<b>MS14</b>	<b>MS15</b>	<b>MS16</b>	<b>MS17</b>	<b>MS18</b>
0	13	7	2	4	4	3	6
<b>MS19</b>	<b>MS20</b>	<b>LS1</b>	<b>LS2</b>	<b>LS3</b>	<b>LS4</b>	<b>LS5</b>	<b>MSC1</b>
5	4	0	0	2	1	5	6
<b>MSC2</b>	<b>MSC3</b>	<b>MSC4</b>	<b>MSC5</b>	<b>MSC6</b>	<b>MSC7</b>	<b>MSC8</b>	<b>MSC6</b>
8	7	11	9	9	9	9	8
<b>MSC10</b>	<b>MSC11</b>	<b>MSC12</b>	<b>MSC13</b>	<b>MSC14</b>	<b>MSC15</b>	<b>MSC16</b>	<b>MSC17</b>
10	9	12	8	7	10	9	8
<b>MSC18</b>	<b>MSC19</b>	<b>MSC20</b>	<b>MSC21</b>	<b>MSC22</b>	<b>MSC23</b>	<b>MSC24</b>	<b>MSC25</b>
9	7	10	10	10	8	10	8
<b>MSC26</b>	<b>MSC27</b>	<b>MSC28</b>	<b>MSC29</b>	<b>MSC30</b>	<b>MSC31</b>	<b>MSC32</b>	<b>MSC33</b>
9	7	7	8	12	9	9	8
<b>MSC34</b>	<b>MSC35</b>	<b>FAC1</b>	<b>FAC2</b>	<b>FAC3</b>	<b>FAC4</b>	<b>FAC5</b>	<b>FAC6</b>
10	7	0	3	2	6	2	0
<b>FAC7</b>	<b>FAC8</b>	<b>FAC9</b>	<b>FAC10</b>	<b>WFC1</b>	<b>WFC2</b>	<b>WFC3</b>	<b>WFC4</b>
2	1	1	1	1	2	1	3
<b>WFC5</b>	<b>WFC6</b>	<b>WFC7</b>	<b>WFC8</b>	<b>WFC9</b>	<b>FWC10</b>	<b>FWC11</b>	<b>FWC12</b>
4	4	2	2	2	2	3	2
<b>FWC13</b>	<b>FWC14</b>	<b>FWC15</b>	<b>FWC16</b>	<b>FWC17</b>	<b>FWC18</b>	<b>JD1</b>	<b>JD2</b>
0	2	3	3	7	2	5	2
<b>JD3</b>	<b>JD4</b>	<b>JD5</b>	<b>JD6</b>	<b>JD7</b>	<b>JD8</b>	<b>JD9</b>	<b>JD10</b>
7	5	2	3	3	3	3	9
<b>JD11</b>	<b>JD12</b>	<b>JD13</b>	<b>JD14</b>	<b>JD15</b>	<b>JD16</b>	<b>JD17</b>	<b>JD18</b>
7	6	3	4	6	5	4	3
<b>JD19</b>	<b>JD20</b>	<b>CB1</b>	<b>CB2</b>	<b>CB3</b>	<b>CB4</b>	<b>CB5</b>	<b>CB6</b>
3	2	2	4	3	2	3	3
<b>CB7</b>	<b>CB8</b>	<b>TP1</b>	<b>TP2</b>	<b>TP3</b>	<b>TP4</b>	<b>TP5</b>	<b>TP6</b>
1	1	2	2	4	1	3	3
<b>TP7</b>	<b>TP8</b>	<b>TP9</b>	<b>TP10</b>	<b>TP11</b>	<b>FAS1</b>	<b>FAS2</b>	<b>FAS3</b>
1	1	2	2	1	4	5	1
<b>FAS4</b>	<b>FAS5</b>	<b>FAS6</b>	<b>FAS7</b>	<b>FAS8</b>	<b>FAS9</b>	<b>FAS10</b>	<b>FAS11</b>
2	2	3	1	1	1	10	7

### 4.3 Item analysis

The reliability of the scale indicates the extent to which it is free from random variance. A frequently used indicator of a scale's reliability is its internal consistency, which refers to the extent to which items in the scale are all measuring the same underlying attribute (Nunnally, 1978). Item analysis was conducted on the sample before and after imputation. Each of the 10 sub-scales was item analysed through the SPSS reliability procedure to identify and eliminate possible items not contributing to an internal consistent description of the scale in question (Theron et al., 2004). High validity and reliability can be built into tests in advance through item analysis, thus improving tests through selection, substitution and revision of items (Anastasi & Urbina, 1997).

From the subscales item-analysed, the number of items in these subscales was flagged as problematic. In the *Job Satisfaction* scale, Item 1 was flagged as a problematic item. The relative magnitude of the squared multiple correlations was (0.886) and the increase in alpha affected by the removal of this item (0.895 from 0.886) suggested the deletion of this item. The decision was to wait for the confirmation from factor analysis before deleting the offending item.

Item 5 of the *Life Satisfaction* subscale presented itself as a problematic item regarding the squared multiple correlation (0.847) and the increase in alpha affected by the removal of the item (0.847 from 0.812) suggested that the item was not successfully reflecting the same underlying latent variable that the majority of items were reflecting. The decision to delete the item was still not honoured, with the intention of confirming from factor analysis.

Item 5, 6, 11 and 16 of *Job Demand Control* subscale also were flagged as problematic. Their effects on internal reliability were minimal as reflected in the possible effects on alpha if the items were to be deleted. Item deletion was going to result in the following changes: Item 5 (0.881 to 0.882), item 6(0.881 to 0.882), item 11(0.881 to 0.882), item 16(0.881 to 0.883). The decision was to leave the items since the effect was insignificant.

Item 1 and item 2 on *Organisational Citizenship Behaviour* scale were also flagged as problematic. The alpha of item 1 would improve from (0.807 to 0.829) and item 2 from (0.807 to 0.813). The size of the subscale suggested against the deletion of the items and as such, the items were not culled. Item 1 of the *Basic Task Performance* subscale was also found problematic. The alpha of the item would improve from (0.933 to 0.934) when the item is deleted. However, due to the insignificance of the change, the decision was to leave the item.

The *Family Stability* subscale also had offending items. The alpha of item 4 would improve (0.781 to 0.874) and the alpha of item 11 would improve from (0.781 to 0.792). Problematic items also plagued the *Marital Satisfaction* subscale. Item 27 and item 29 were flagged as problematic. The alpha of item 27 would improve from (0.800 to 0.805) and the alpha of item 29 would improve from (0.800 to 0.807). The decision was to leave the items since the effect of their deletion would be insignificant. Below is Table 2 summarising the item analysis.

Table 2: Summary of item analysis

Subscale	Sample Size(n)	Alpha	Mean	Variance	Number of items in final scale	Number of items deleted
Stress	276	.849	38.449	107.128	14	0
Jobsat	272	.886	58.327	227.291	20	0
Lifesat	309	.812	15.220	24.322	5	0
Marsat	284	.800	15.348	313.465	35	0
Famco	306	.781	35.699	55.385	10	0
WFC	300	.874	44.883	154.016	18	0
JDemand	289	.881	61.515	231.285	20	0
OCB	311	.807	26.977	61.590	8	0
Taskperf	308	.933	39.074	95.177	11	0
Famstab	303	.781	44.270	106.662	11	0

#### 4.7 Dimensionality analysis

The scales used were expected to have uni-dimensional sets of items to reflect variance in each of the 10 latent variables. Unrestricted principal component analyses with Varimax rotation were performed on each scale. The objective of these analyses was to confirm the uni-dimensionality of each scale and to remove items with inadequate factor loadings and or split heterogeneous scales into two or

more homogenous subsets of items if necessary. A series of confirmatory factor analysis using LISREL would probably have proved more stringent tests of the dimensionality of each scale (Theron et al., 2004). In this case only one factor was extracted in terms of the eigenvalues greater than one criterion for each of the 10 subscales. In case of the Perceived Stress Scale, item 4 was removed because it loaded very low on that factor ( $\lambda=0.0368$ ). In the case of the Minnesota Satisfaction Questionnaire, item 1 and 17 has been deleted, because they loaded unsatisfactorily low on that factor ( $\lambda= 0.436$ ). All remaining items had satisfactory loadings ( $\lambda\leq 0.62$  and  $\lambda\leq 0.65$ ).

Table 3: Principal axis factoring of subscales

<b>Subscale</b>	<b>Determinant</b>	<b>KMO</b>	<b>% Variance Explained</b>	<b>% Residual r &gt;0.05</b>
Stress	0.007	0.878	31.990	79
Jobsat	0.000	0.911	36.706	127
Lifesat	0.111	0.771	59.139	7
Marsat	1.64	0.902	23.072	465
Famco	0.017	0.851	41.272	29
WFC (1)	0.013	0.823	45.193	36
WFC (FWC)	0.030	0.797	41.840	28
JDemand(1)	0.013	0.857	38.615	52
JDemand(2)	0.033	0.882	51.721	21
OCB	0.062	0.868	46.536	23
Taskperf	6.46	0.872	55.292	45
Famstab	0.001	0.936	53.870	24

#### 4.5 Variable type

The structural equation modelling of the Family Stability model using individual items to operationalise the latent variables would have become tedious with too many parameters to be estimated. In order to overcome the problem, an item parcelling exercise was undertaken. The results justify the decision. The newly created parcels will typically exhibit distributions that more closely approach a normal distribution than the original individual items. There will also be an added advantage that fewer parameters will be estimated in the measurement model, implying that the estimates will be more stable in smaller sample (Oehley, 2007). The method of item parcelling used the factor loadings as a guide; the factor loadings were rank ordered and every alternate loading was placed into the first

item parcel and the remainder were placed in the second item parcel. The variable type of the item parcels was treated as that of a continuous variable and the covariance matrix was therefore analysed.

#### 4.6 Multivariate normality

The LISREL default estimation method when fitting a measurement or structural model when analysing the covariance matrix is a maximum likelihood. Maximum likelihood requires that the independent variables (parcels) should follow a multivariate normal distribution. Even small departures from multivariate normality can lead to large differences in the chi-square test, undermining its utility. Lack of multivariate normality generally inflates the chi-square statistic such that the overall chi-square fit statistic for the model as a whole is biased towards a Type 1 error (i.e. rejecting a model which should not be rejected). Furthermore, in instances of non-normality, tests of all parameter estimates are expected to be biased, yielding too many results (Oehley, 2007). The univariate and multivariate normality of the indicator variables were evaluated using PRELIS 2.80 (Jöreskog & Sörbom, 2006).

Table 4: Test of Multivariate Normality before and after normalisation

			<b>Before Normalisation</b>				
			<b>Skewness</b>		<b>Kurtosis</b>		
Value	Z-Score	P-Score	Value	Z-Score	P-Value	Chi-Square	P-Value
40.293	20.325	0.000	429.915	14.285	0.000	617.181	0.000
			<b>After Normalisation</b>				
			<b>Skewness</b>		<b>Kurtosis</b>		
Value	Z-Score	P-Score	Value	Z-Score	P-Value	Chi-Square	P-Value
33.972	15.242	0.000	418.920	12.922	0.000	399.274	0.000

Table 4 indicates that although normalisation improved the situation, the results continue to reflect high levels of skewness and kurtosis. As a result, the null hypothesis of multivariate normality still has to be rejected ( $p < 0, 05$ ). As a result, it was decided to use robust maximum likelihood rather than maximum likelihood to fit the Family Stability measurement model. It is best suited for the estimation of the parameters set free in the fitted measurement and structural model.

However, the utilisation of robust maximum likelihood estimation also necessitated the calculation of the asymptotic covariance matrices (Oehley, 2007). Covariance matrices were subsequently computed from each of the transformed/normalised data sets to serve as the input for the LISREL analysis.

#### **4.7 Measurement model fit**

Measurement model describes the extent to which the indicator variables represent the latent variables and the extent to which there is reliability and validity of the manifests variables (Diamantopoulos & Sigauw, 2000). Measurement model fit refers to the extent to which a hypothesised model fits (is consistent with or explains) the data. Evaluation of model fit should derive from a variety of sources and be based on several criteria that can assess the model fit from a variety of perspectives (Oehley, 2007). The traditional approach was to use the  $\chi^2$  test statistic to test the hypothesis that there is no significant difference between the reproduced covariance matrix implied by the model and the observed population variance (De Goede, 2004). Jöreskog and Sörbom (1993) assert that chi-square is a badness of fit measure in the sense that a small chi-square corresponds to good fit and a large chi-square to bad fit. Zero chi-square indicates a perfect fit. Various fit statistics have been categorised by Kelloway (1998) into goodness of fit indices used for assessing: absolute fit, comparative fit and parsimonious fit. These categories are used in this study to present the goodness-of-fit-statistics (Oehley, 2007).

However, before the model can be fitted the parameters are estimated so that the discrepancy between the sample covariance matrix  $S$  and the implied sample covariance matrix  $\Sigma(\theta)$  is minimal. The following exact null hypothesis was tested with regards to the population:

$$H_0: \Sigma = \Sigma(\theta)$$

$$H_0: \Sigma \neq \Sigma(\theta)$$

The null hypothesis is then tested through the Satorra-Bentler  $\chi^2$  statistic. The aim is however not to reject the null hypothesis as a non-significant  $\chi^2$  indicates that the

model fits the data due to the ability of the model to reproduce the sample covariance matrix to a degree of accuracy that could be explained in terms of the sampling error only under the exact fit null hypothesis (Kelloway in Ohley, 2007).

The null hypothesis of exact fit is unrealistic. Consequently, the close fit null hypothesis is tested:

$$H_0: \text{RMSEA} \leq 0,05$$

$$H_0: \text{RMSEA} > 0,05$$

#### **4.7.1 Fitting the family stability measurement model to the total sample**

LISREL 8.80 was used to perform a confirmatory factor analysis on the family stability model to determine the fit of the model. The robust maximum likelihood estimation method was used to produce the estimates due to the failure of the data to satisfy the multivariate normality assumption. Its purpose is to test the ability of the hypothesised measurement model to reproduce the observed correlations matrix (Krafft, Engelbrecht & Theron, 2004). An admissible final solution was found after 12 iterations. The consequent path diagram of the fitted measurement model is depicted in Fig 12.



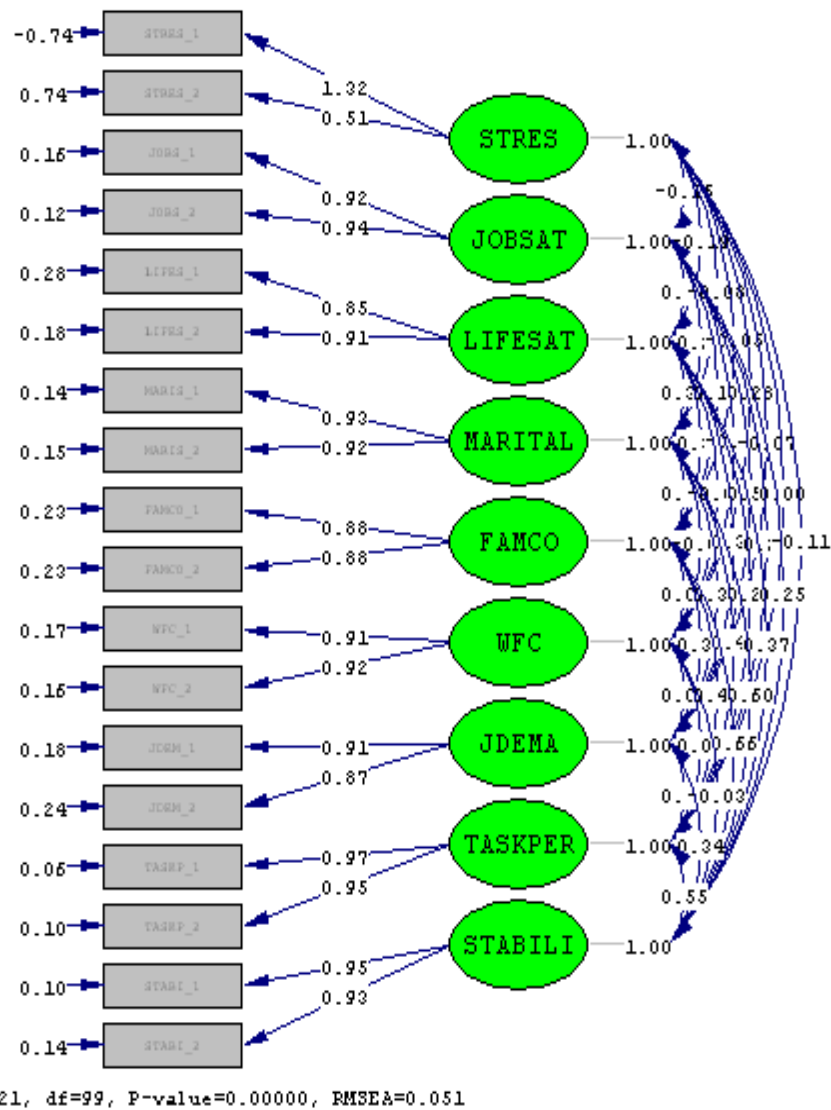


Figure 12: Family Stability measurement model.

#### 4.7.2 Goodness of fit

**Absolute Fit Statistics:** The chi-square is the traditional measure for evaluating the overall fit of the model. Theoretically, a statistically significant chi-square causes rejection of null hypothesis. The Satorra-Bentler Scaled Chi-Square has shown good performance regardless of the degree of non-normality in large samples when the model has been correctly specified. For smaller samples a recommendation is made to inspect the Comparative Fit Index (CFI) or Incremental Fit Index (IFI) which only has a small downward bias (2-4%)(Oehley, 2007). In this model, the Satorra-Bentler Scaled Chi-square comes to 177.07 with 98 degrees of

freedom and  $P=0.00$ , implying that the null hypothesis of exact fit is rejected in this study. As recommended, due to the smaller size of the sample(359) the CFI and the IFI have been inspected, the values of both are 0.99.CFI and IFI(indices of comparative fit, not absolute fit)values close to 1 represent good fit (Diamantopoulos & Sigauw, 2000) (see Table 5).

Table 5: Goodness of fit statistics for the Family Stability measurement model

Degrees of Freedom=98
Minimum Fit Function Chi-Square=210.99( $P=0.00$ )
Normal Theory Weighted Least Squares Chi-Square=207.13( $P=0.00$ )
Satorra-Bentler Scaled Chi-Square=177.07( $P=0.00$ )
Chi-Square Corrected For Non-Normality=223.90( $P=0.00$ )
Estimated Non-Centrality Parameter=(NCP)=79.07
90 Percent Confidence Interval=(45.70;120.27)
Minimum Fit Function Value=0.59
Population Discrepancy Function Value ( $F_0$ )=0.22
90 Percent Confidence Interval for $F_0$ =(0.13;0.34)
Root Mean Square Error of Approximation(RMSEA)=0.047
90 Percent Confidence Interval for RMSEA=(0.036;0.059)
P-Value For Test of Close Fit(RMSEA<0,05)=0.63
Expected Cross-Validation Index(ECVI)=0.90
90 Percent Confidence Interval For ECVI=(0.81;1.02)
ECVI for Saturated Model= 0.96
ECVI for Independence Model=17.30
Chi-Square for Independence Model with 120 Degrees of Freedom=6156.67
Independence AIC=6192.67
Model AIC=323.07
Saturated AIC=342.00
Independence CAIC=6280.57
Model CAIC=679.55
Saturated CAIC=1177.05
Normed Fit Index(NFI)=0.97
Non-Normed Fit Index(NNFI)=0.98
Parsimony Normed-Fit Index(PNFI)=0.62
Comparative Fit Index(CFI)=0.99
Incremental Fit Index(IFI)=0.99
Relative Fit Index(RFI)=0.96
Critical N(CN)=270.87
Root Mean Square Residual (RMR)=0.028
Standard RMR=0.034
Goodness of Fit Index (GFI)=0.94
Adjusted Goodness of Fit Index (AGFI)=0.89
Parsimony Goodness of fit index (PGFI)=0.54

The Root Mean Square Residual (RMR): The RMR and standardised RMR reflect the square root of the mean squared difference between the observed and the estimated covariance matrices (Spangenberg & Theron, 2004; Krafft et al., 2004). The lower bound of the index is 0 and lower values are taken to indicate good fit. Values less than 0.05 are interpreted as indicating a good fit to the data. The RMR of 0.028 and standardised RMR of 0.034 indicate good fit.

The Root Mean Square Error of Approximation (RMSEA): The RMSEA is also reported by LISREL. The RMSEA indicates how well the model with unknown but optimally chosen parameters values fit the population covariance matrix if it were available. Values less than 0.05 are indicative of good fit, between 0.05 and under 0.08 are reasonable fit, between 0.08 and 0.10 are mediocre fit and greater than 0.10 are poor fit (Diamantopoulos & Sigauw, 2000). Krafft et al. (2004) argues that a value lower than 0.10 indicates a good fit, while a value lower than 0.05 indicates a very good fit and values below 0.01 indicate outstanding fit to the data. A RMSEA of 0.047 in Table 5 indicates a very good fit.

The Goodness of Fit Index (GFI): GFI measure is based on the ratio of the sum of squared discrepancies to the observed variances. The adjusted GFI adjust the GFI for degrees of freedom in the model. Both these measures should be near 0 for poor fit and 1 for a perfect fit, with values exceeding 0.9 indicating good fit to the data (Spangenberg & Theron, 2004; Krafft et al., 2004). Evaluating the fit of the model in terms of these two indices (0, 94 & 0, 89), a relatively favourable conclusion on the fit of the model surfaces. Diamantopoulos and Sigauw (2000) assert that the GFI is the most reliable index of absolute fit in most studies. The guidelines for the interpretation of GFI and AGFI are mainly grounded on experience, which makes them rather arbitrary and should therefore be utilised with circumspection (Spangenberg & Theron, 2004).

Comparative Fit Statistics: Comparative Fit chooses a baseline model for comparison. Comparative fit is based on a comparison of the measurement models with the independent model that provides the poorest fit possible to the data (Krafft et al., 2004; Diamantopoulos & Sigauw, 2000). In line with this is the normed-fit index (NFI), non-normed fit index (NNFI), the incremental fit index (IFI), the

comparative fit index(CFI) and the relative fit index(RFI). All of these indices assume values between 0 and 1, while good fit is indicated by a value above 0.90 (Kraft et al., 2004). Diamantopoulos and Sigauw (2000) argue that non-normed fit index (NNFI) is expected to range between 0 and 1. For this study, (NFI=0.97) indicates that the model is fitting well. The NNFI, adjust the NFI for the number of the degrees of freedom in the model (Oehley, 2007). In this study (NNFI=0.98) indicates a good fit. In addition, the (IFI=0.99) also indicates a good fit. The (CFI=0.99) is also indicating a good fit in this study.

**Parsimony Fit Statistics:** The Parsimony Goodness-of-Fit Index (PGFI) adjusts the GFI for the degrees of freedom in the model, while the parsimonious normed fit index (PNFI) adjusts the NFI for model parsimony. Both of these indices have a range of between 0 and 1 but unlike other indices, they do not have recommendations for how high these scores should be in order to indicate the parsimonious fit. The indices are best suited for comparing two alternative models in order to choose the model with the highest level of parsimonious fit (Oehley, 2007).

**Conclusion:** For the measurement model of Family Stability, the null hypothesis of exact fit is rejected, but the null hypothesis of close fit is not rejected. Consequently, it can be said that the model approximately reproduces the observed covariance matrix, but not perfectly.

#### **4.7.3 Factor loading matrix**

All indicator variables (i.e., item parcels) load significantly on the latent variables that they were designed to reflect (as indicated in Table 6). Significant factor loadings are indicated by t-values  $\geq |1.96|$ . In summary, all indicator variables load satisfactorily (Table 6) with factor loadings ranging from 12.56 to 24.41.

Table 6: Completely standardised LAMBDA-X factor loading matrix for the Family Stability measurement model

	STRES	JOBSA	LIFES	MARSA	FAMCC	WFC	JDEM	TASKP	STABIL
STRES 1	<b>0.81</b> (0.06) 14.50*								
STRES 2	<b>0.62</b> (0.05) 12.56*								
JOBSA 1		<b>0.79</b> (0.04) 21.87							
JOBSA 2		<b>0.81</b> (0.04) 21.29*							
LIFE 1			<b>0.86</b> (0.05) 17.17*						
LIFE 2			<b>1.01</b> (0.05) 18.73*						
MARSA 1				<b>0.80</b> (0.03) 24.18*					
MARSA 2				<b>0.84</b> (0.04) 22.87*					
FAMCO 1					<b>0.79</b> (0.04) 20.44*				
FAMCO 2					<b>0.80</b> (0.04) 20.25*				
WFC 1						<b>0.81</b> (0.05) 17.51*			
WFC 2						<b>0.81</b> (0.05) 17.34*			
JDEM 1							<b>0.93</b> (0.04) 20.94*		
JDEM 2							<b>0.85</b> (0.04) 20.67*		
TASKP 1								<b>0.89</b> (0.04) 25.35*	
TASKP 2								<b>0.86</b> (0.04) 24.41*	
STABIL 1									<b>0.88</b> (0.03) 26.78*
STABIL 2									<b>0.84</b> (0.03) 24.22*

Note: Completely standardised factor loadings in **bold type**; standard error estimates in brackets; significant factor loadings are indicated by  $t$ -values  $\geq 1.96$ /\*

Determining the reliability of the indicators requires the investigation of the squared multiple correlations ( $R^2$ ) of the indicators. A high  $R^2$  value would indicate high reliability of the indicator in question (Oehley, 2007). The proportion of the variance in indicator variables explained by the underlying latent variable ranges between (0, 53 and 0, 94). These results are reflected in Table 7. The second item parcel of stress subscale (STRES\_2) is the only indicator that may have a questionable relevance to the Stress dimension to which it is linked. Only approximately 53% of variance in STRES\_2 can be explained in terms of the first latent variable while the remaining 47% of the variance in this parcel could be attributed to systematic and random measurement error.

Table 7:  $R^2$  for Family Stability model

	$R^2$		$R^2$		$R^2$		$R^2$
<b>STRES_1</b>	0.91	<b>LIFES_1</b>	0.73	<b>FAMCO_1</b>	0.78	<b>JDEM_1</b>	0.82
<b>STRES_2</b>	0.53	<b>LIFES_2</b>	0.81	<b>FAMCO_2</b>	0.76	<b>JDEM_2</b>	0.76
<b>JOBSA_1</b>	0.88	<b>MARS_1</b>	0.86	<b>WFC_1</b>	0.82	<b>TASKP_1</b>	0.94
<b>JOBSA_2</b>	0.84	<b>MARS_2</b>	0.85	<b>WFC_2</b>	0.84	<b>TASKP_2</b>	0.90
<b>STABIL_1</b>	0.90						
<b>STABIL_2</b>	0.86						

#### 4.7.4 Standardised residuals

Residuals refer to the differences between corresponding cells in the observed and fitted covariance/correlation matrices. Residuals, especially standardized residuals provide diagnostic information on sources of lack of fit in models (Jöreskog & Sörbom, 1993). Standardised residuals can be interpreted as standard normal deviates (i.e. number of standard deviations above and below the mean). Standardised residuals are considered to be large if they exceed +2.58 or -2.58 (Diamantopoulos & Sigauw, 2000). A large positive residual would indicate that the model underestimates the covariance between two variables, while a large negative residual would indicate that the model overestimates the covariance between variables. Underestimation suggests that the model needs to be modified by adding additional explanatory paths, which could better account for the



the 45-degree reference line or not. If the points fall on the 45-degree reference line, it would be indicative of a good model fit (De Goede, 2004). Further evidence of a reasonably fit model is provided by the fact that the standardised residuals for all pairs of observed variables tend to moderately deviate from the 45 degrees reference line on the Q-plot (Fig 14).

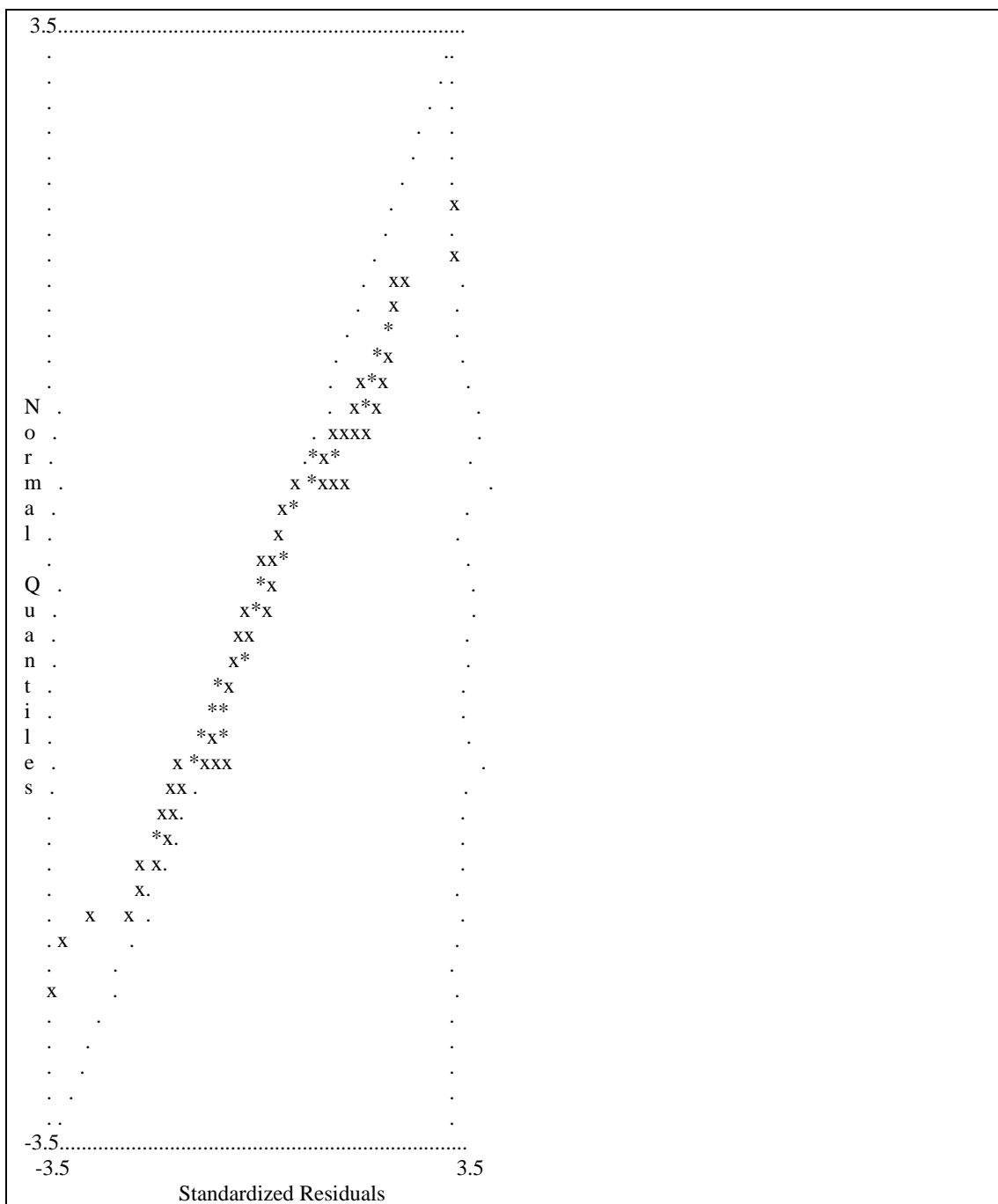


Figure 14: Q-plot of standardised residuals for Family Stability measurement model



#### 4.7.5 Modification indices

A modification index measures how much chi-square is expected to decrease if that particular parameter is set free and the model is re-estimated. The modification index is approximately equal to the difference in chi-square between two models in which one parameter is fixed in one model and free in the other model. The largest modification index tells which parameter to set free to improve the fit maximally. There is also the estimated change of the parameter which measures how much the parameter is expected to change in the positive or negative direction if set free (Jöreskog & Sörbom, 1993). Diamantopoulos and Sigauw(2000) argue against model modification unless a clear and well founded interpretation can be offered. The reason for this is that data-driven model modifications are susceptible to capitalisation on chance and that peculiar characteristics of the sample may influence the particular modifications that are performed.

The proposed Family Stability measurement model depicted in Fig 10 seems to fit the data reasonably well. The analysis of the standardised residuals does not seem to suggest that the model might be improved through the addition of one or more paths in as far as the suggestions of large residuals would suggest the need to remove the paths from the model. The modification indices were nonetheless analysed in order to decide which paths, when added to the model would significantly improve the parsimonious fit of the model. Examination of the modification indices calculated for the B matrix indicates 18 additional paths would improve the model fit significantly. This is considered minimal as it represents less than 10% of the total possible paths. The completely standardised expected change for the majority of these indices is quite substantial. These results are of sufficient magnitude to consider freeing these paths. However, specific Family Stability items were explicitly and intentionally written to serve as behavioural indicators of specific latent Family Stability dimensions.

The foregoing results (see Table 6) suggest that the indicator parcels formed out of these items do generally succeed in providing empirical evidence of the underlying latent variables they are meant to reflect. The magnitude of the modification index

values suggests that many of them also provide information on latent variables they were not designed to reflect, leaving the question of whether these capacities should be utilised in the evaluation of the structural model fit (Oehley, 2007). It was decided not to use the set of items that were designed to reflect specific latent Family Stability dimensions to reflect other Family Stability dimensions they were not initially meant to represent. The final decision was to remain faithful to the design intentions and not free any additional elements of B matrix. Examination of the modification indices and completely standardised parameter changes associated with fixed parameters in the matrix reveal covariance terms that if set free would not result in significant decreases in the chi-square measure. The magnitude of the completely standardised expected changes (maximum 0.09) do not warrant seriously considering setting these parameters free. There is also no theoretical argument to justify allowing for corrected measurement errors.

#### **4.8 Structural model fit**

The structural model is the component of the general model that indicates the relationship between latent variables and observed variables that are not indicators of latent variables (Oehley, 2007). The aim of the model is to determine whether the theoretical relationships specified at the conceptualisation stage (see par 3.2) are indeed supported by the data. The model also provides the signs of the parameters, which represent the paths between the latent variables to indicate whether the directions of the hypothesised relationships are positive or negative. It also provides information about the strengths of the hypothesised relationships and lastly, it indicates the amount of variance in each endogenous latent variable that is accounted for by the independent latent variables that are expected to impact upon it (Diamantopoulos & Sigauw, 2000).

LISREL 8.50(Jöreskog & Sörbom, 2006) was used to evaluate the fit of the comprehensive Family Stability Structural model. Robust maximum likelihood estimation method was used to produce the estimates. An admissible final solution of parameter estimate was obtained after 99 iterations. The full spectrum of the indices provided by LISREL to assess the goodness-of-fit of the data is shown in Table 8. The structural model (Fig 15) and the goodness of fit statistics (Table 8)

for the comprehensive Family Stability structural model are presented first and a more detailed presentation of these results follows thereafter.

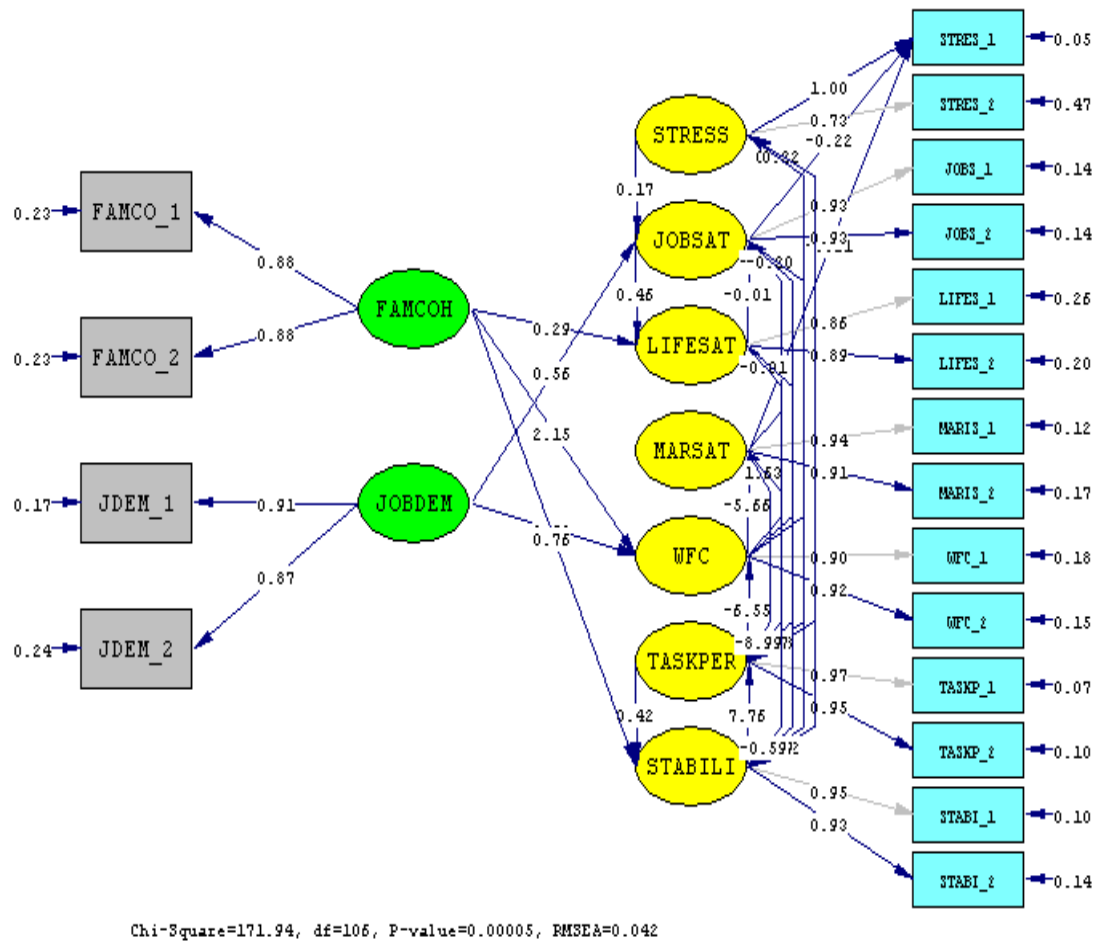


Figure 15: Family Stability structural model

Table 8: Goodness of fit statistics for the Family Stability structural model

Degrees of Freedom=106
Minimum Fit Function Chi-Square=203.66 (P = 0.00)
Normal Theory Weighted Least Squares Chi-Square=200.66(P = 0.00)
Satorra-Bentler Scaled Chi-Square=171.94 (P = 0.00)
Chi-Square Corrected For Non-Normality=248.53 (P = 0.00)
Estimated Non-Centrality Parameter(NCP) = 65.94
90 Percent Confidence Interval NCP = (33.96 ; 105.83)
Minimum Fit Function Value=0.57
Population Discrepancy Function Value=0.18
90 Percent Confidence Interval for F0 = (0.095 ; 0.30)
Root Mean Square Error of Approximation(RMSEA) =0.042
90 Percent Confidence Interval for RMSEA=(0.030 ; 0.053)
P-Value For Test of Close Fit(RMSEA<0,05)= 0.89
Expected Cross-Validation Index(ECVI)= 0.84
90 Percent Confidence Interval for ECVI=(0.75 ; 0.95)
ECVI for Saturated Model=0.96
ECVI for Independence Model=17.30
Chi-Square for Independence Model with 120 Degrees of Freedom=6156.67
Independence AIC=6192.67
Model AIC=301.94
Saturated AIC=342.00
Independence CAIC=6280.57
Model CAIC=619.35
Saturated CAIC=1177.05
Normed Fit Index (NFI)= 0.97
Non-Normed Fit Index (NNFI)= 0.98
Parsimony Normed-Fit Index (PNFI)= 0.67
Comparative Fit Index (CFI)= 0.99
Incremental Fit Index (IFI)= 0.99
Relative Fit Index (RFI)= 0.96
Critical N (CN)= 298.30
Root Mean Square Residual (RMR)= 0.026
Standardized RMR=0.031
Goodness of Fit Index (GFI)=0.94
Adjusted Goodness of Fit Index (AGFI)= 0.91
Parsimony Goodness of fit index (PGFI)= 0.58

#### 4.8.1 Goodness of fit statistics

**Absolute fit statistics:** The chi-square is a measure of the overall fit of the model to the data. It measures the distance between the sample covariance matrix and the fitted covariance matrix (Jöreskog & Sörbom, 1993). Chi-square as the

indicator of the badness of the model, a small chi-square corresponds to good fit and a large chi-square to a bad fit. In this case the Satorra-Bentler Scaled Chi-square value comes to 171.94 with 106 degrees of freedom and a  $P=0.00$ , implying that the null hypothesis of exact fit(of the entire model) is rejected. This could mean imperfect model fit and possible rejection of the model. However, due to the small sample size (359) the CFI and the IFI have been inspected, with the values of both being 0.99, indicating the good fit (values close to 1 represent good fit) (Diamantopoulos & Sigauw, 2000). The *Root Mean Square Residual (RMR)* of 0.026 is below the required value of 0.05 as purported by Kelloway(1998) as an indication of the model that fits the data well. The *Standardised RMR*, which is known to provide a more stable result, has a value of 0.031, which is less than 0.05, interpreted as indicating a good fit. The *Root Mean Square Error of Approximation (RMSEA)* of 0.042 reflects a value below 0.05, indicating a very good fit. The *90 Percent Confidence Interval for RMSEA=* (0.030; 0.053) confirms the conclusion and suggest a reasonable model fit. Both the *GFI* and the *AGFI* indices (0.94 and 0.94) are exceeding 0.9 indicating a good fit to the data.

**Comparative fit statistics:** The indices for comparative fit range from 0.96 to 0.99, except the *PNFI* with the value of 0.67, which does not have a recommendation for how high the scores should be in order to indicate a parsimonious fit. This further corroborates the assertion that the model has a very good fit to the data.

**Conclusion:** For the structural model the null hypothesis of exact fit(of the entire model) is rejected, however the null hypothesis of close fit is not rejected. These results indicate that the data approximately reproduces the observed covariance matrix (Oehley, 2007).



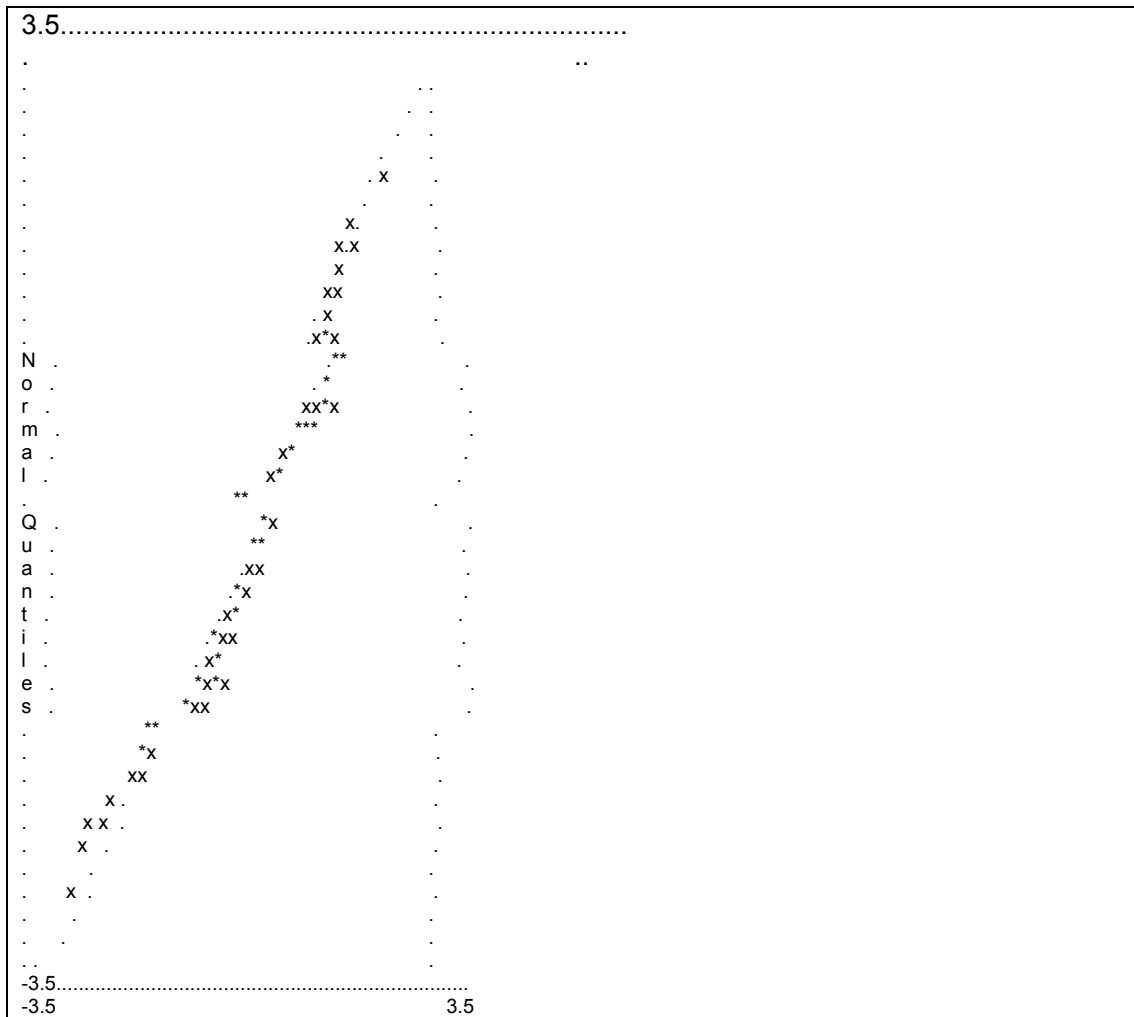


Figure 17: Q-plot of standardized residuals for structural model

#### 4.8.3 Parameter estimates

The theoretical linkages proposed by the Family Stability model depicted in Fig 11 are investigated by testing the null hypotheses. Depending on the outcomes of these hypothesis tests, the research hypothesis will either be confirmed or rejected. The analysis of the structural relationship reveals whether the theoretical model, and thus the hypotheses can be confirmed. The relevant matrices for the direct effects between the constructs are the Beta ( $B$ ) and gamma ( $\Gamma$ ) matrices (Krafft et al., 2004). Three important issues that are relevant when evaluating the structural model are: a) The signs of the parameters representing the paths between the latent variables will indicate whether the direction of the hypothesised relationship is as predicted (i.e. positive or negative). b) The magnitudes of the

estimated parameters provide important information on the strength of the relationships ;(at the very least these parameters should be significant ( $p < 0,05$ ) as indicated by  $t$ -values in excess of 1,96. In that instance, the null hypothesis will be rejected. c) The squared multiple correlations for the structural equations indicate the amount of variance in each endogenous variable that is accounted for by the latent variables that are expected to impact upon it. The higher the squared multiple correlation, the greater the joint explanatory power of the hypothesized antecedents (Diamantopoulos & Sigauw, 2000).

In order to evaluate the structural model, LISREL provides completely standardised parameters for the Beta (B) and Gamma ( $\Gamma$ ) matrices, including their standard error and  $t$ -values. The B matrix describes the relationship(s) between the endogenous variables and reflects the slope of the regression of  $\eta_1$  on  $\eta_j$  (Henning et al., 2007). The results depicted in Table 8 provide information which could be used to evaluate each of the relevant statistical hypotheses formulated earlier in this study. Mention must be made of the fact that obtaining a significant B or  $\Gamma$  path coefficient estimate does not mean proof of a causal effect. The purpose of SEM is to test causal theories using non-experimental data. The *ex post facto* nature of the research design precludes the drawing of causal inferences from significant path coefficients (Oehley, 2007).



Table 10: Completely standardised GAMMA matrix of path coefficients for the structural model

	FAMCOH	JOBDEM
<b>STRESS</b>	-	-
<b>JOBSAT</b>	-	<b>0.56</b> (0.06) 9.16*
<b>LIFESAT</b>	<b>0.29</b> (0.06) 4.55*	-
<b>MARSAT</b>	-	-
<b>WFC</b>	<b>2.15</b> (2.35) 0.91	<b>1.90</b> (1.95) 0.97
<b>TASKPER</b>	-	-
<b>STABILI</b>	<b>0.76</b> (0.12) 6.21*	

Note: Completely standardised path coefficient in bold type; standard error estimates in brackets;  $t$ -values  $\geq |1.96|$  indicate significant parameters estimate\*

The  $\Gamma$  matrix describes the relationships between the exogenous variables and the endogenous variables and reflects the slope of the regression of  $\eta_i$  on  $\xi_j$  (Theron et al, 2004; Oehley, 2007). The matrix is used to evaluate the significance of the parameter estimates for the causal paths hypothesised by the structural model depicted in Fig 15. The results depicted in Table 10 indicate that the hypothesised paths coefficient ( $\gamma_{11}$  &  $\beta_{18}$ ) estimates are insignificant ( $t \leq |1.96|$  at  $p=0.05$ ) (see Fig 1).

### Hypothesis 1

In this instance (Table 10), the null hypothesis is not rejected ( $t=0.97$ ). *Job Demands* has not been found to have a significant and positive effect on *Work-to-Family Conflict*. Consequently, research hypothesis 1 is not corroborated.

### Hypothesis 2

*Family Cohesion* has not been found to have a significant effect on *Work-to-Family Conflict* (Table 10), as the null hypothesis is not rejected ( $p>0.05$ ).

Table 11: Completely standardised BETA path coefficient matrix for the structural model

	STRES	JOBSA	LIFES	MARSA	FAMC	WFC	JDEM	TASKP	STABIL
STRESS						<b>0.37</b> (0.07) 5.27*		<b>0.22</b> (0.06) 3.76*	
JOBSAT	<b>0.17</b> (0.07) 2.24*		<b>-0.01</b> (0.12) -0.10	<b>-0.02</b> (0.10) -0.15		<b>-0.20</b> (0.06) -3.21*			
LIFESAT		<b>0.46</b> (0.10) 4.45*				<b>-0.01</b> (0.06) -0.12			
MARSAT						<b>-5.56</b> (3.13) -1.81		<b>1.63</b> (0.77) 2.12*	
FAMCO									
WFC								<b>-6.55</b> (6.94) -0.94	
JDEMAN									
TASKP	<b>2.08</b> (1.59) 1.31	<b>0.17</b> (0.94) 0.18	<b>0.75</b> (1.04) 0.72	<b>-8.99</b> (7.69) -1.17					<b>7.76</b> (5.69) 1.36
STABIL	<b>0.02</b> (0.07) 0.30	<b>0.09</b> (0.09) 0.96	<b>0.18</b> (0.09) 2.00*	<b>-0.59</b> (0.22) 2.72*				<b>0.42</b> (0.10) 4.40*	

Note: Completely standardised path coefficient in **bold type**; standard error estimates in brackets-values  $\geq 1$ ,

96 | indicate significant parameter estimates\*

### Hypothesis 3

*WFC* have been found to have a significant and positive effect on *Stress* ( $t=5.27$ )(Table 11) as the null hypothesis  $H_0$  is rejected in favour of  $H_{a3}$  ( $p>0, 05$ ).

### Hypothesis 4

*WFC* have been found to have a significant and negative effect on *Job Satisfaction* ( $t=-3.21$ )(Table 11) as the null hypothesis  $H_0$  is rejected in favour of  $H_{a4}$  ( $p>0, 05$ ).

### Hypothesis 5

*WFC* has not been found to have a significant and negative effect on *Marital Satisfaction* ( $t=-1.81$ ) (Table 11) as the null hypothesis  $H_0$  is not rejected in favour of  $H_{a5}$  ( $p>0.05$ ).

### Hypothesis 6

*WFC* has not been found to have a significant and negative effect on *Life Satisfaction* ( $t=-0.12$ ) (Table 11) as the null hypothesis  $H_0$  is not rejected in favour of  $H_{a6}$  ( $p>0.05$ ).

### Hypothesis 7

In this instance, the null hypothesis is not rejected ( $t= 1, 31$ )(Table 11), indicating that *Stress* does not have a significant effect on *Task Performance*.

### Hypothesis 8

*Stress* has not been found to have a significant effect on *Stability* (Table 11) and the null hypothesis is not rejected ( $p>0, 05$ ).

### Hypothesis 9

The null hypothesis is not rejected ( $t=0.18$  at  $p>0.05$ )(Table 11). *Job Satisfaction* does not have a significant effect on *Task Performance*.

### Hypothesis 10

*Job Satisfaction* has not been found to have a significant effect on *Stability* (Table 11) as the null hypothesis  $H_0$  is not rejected ( $p>0, 05$ ).

### Hypothesis 11

*Marital Satisfaction* has not been found to have a significant and positive effect on *Job Performance* ( $t=-0,15$ ) (Table 11) as the null hypothesis  $H_0$  is rejected in favour of  $H_a$  ( $p>05$ ).

### Hypothesis 12

*Marital Satisfaction* has been found to have a significant and positive effect on *Stability* ( $t=2,72$ ) (Table 11) as the null hypothesis  $H_0$  is rejected in favour of  $H_a$  ( $p>05$ ).

### Hypothesis 13

In this instance, the null hypothesis is not rejected ( $t=0,72$ ), indicating that *Life Satisfaction* does not have a significant effect on *Task Performance* (Table 11).

### Hypothesis 14

*Life Satisfaction* has been found to have a significant positive effect on *Stability* with the ( $t=2,00$ ) as the null hypothesis is rejected (Table 11).

### Hypothesis 15

*Stability* has not been found to have a significant positive effect on *Task Performance* with the ( $t=1,36$ ) (Table 11) as the null hypothesis is not rejected.

### Hypothesis 16

*Task Performance* has been found to have a significant positive effect on *Stability* with the ( $t=4,40$ ) as the null hypothesis is rejected (Table 11).

### Hypothesis 17

*Stability* has not been found to have a significant positive effect on *Family Cohesion* with the ( $t=0,00$ ) (Table 11) as the null hypothesis is not rejected.

#### **4.8.4 Variance explained by endogenous latent variables**

The squared multiple correlations of the endogenous latent variables in the model are shown in Table 12.

Table 12: R<sup>2</sup> for structural equations

	R <sup>2</sup>
<b>STRES</b>	0.18
<b>LIFESAT</b>	0.33
<b>JOBSAT</b>	0.35
<b>MARSAT</b>	-31.69
<b>STABILI</b>	0.22
<b>WFC</b>	-32.98
<b>TASKP</b>	-53.76

Table 12 indicates that an unsatisfactory proportion of the variance in the endogenous latent variables is not explained by the latent variables in the model. The model's inability to account for the variance in the latent variables is disappointing.

#### **4.8.5 Modification indices and possible model modification options**

Examination of the modification index values calculated for the Beta matrix show an additional 7 paths that would significantly improve the fit of the model. The standardised expected change values associated with the paths in question are all substantive enough and are all in expected direction. The modification indices calculated for Beta suggest a causal linkage between *Stress* and *Job Satisfaction* (MI=2.24). This suggests that the higher the *Stress* level, the higher the level of *Job Satisfaction*. From a cognitive activation theory of stress, this makes sense because people need a certain magnitude of stress to be aroused to perform. *Job Satisfaction* has been found to have a significant effect on *Life Satisfaction*

( $MI=4.45$ ). This makes sense because life satisfaction is derived from different aspects of a person's life and a person's job constitutes an important facet in a person's life (see par 2.13.4). *Task Performance* has been found to have a significant positive effect on *Stress* with the ( $MI= 3,76$ ). This makes sense from Mark's scarcity approach (see par 2.11.1). *Task Performance* has been found to have a significant positive effect on *Marital Satisfaction* with the ( $t= 2,12$ ). This also makes a theoretical sense and can be explained by person-role merger theory that holds that the person's experience in one sphere of life has a propensity of spilling over to other spheres. *Task Performance* has not been found to have a significant positive effect on *WFC* with the ( $t= -0, 94$ ). *Marital Satisfaction* has not been found to have a significant and positive effect on *Job Satisfaction* ( $t=-0,15$ ).

A further examination of the modification index values calculated for  $\Gamma$  indicate that additional 3 paths would significantly improve the fit of the model. *Family Cohesion* has also been found to have a significant, positive and reasonably strong effect on *Stability* ( $t=6,21$ ). This makes theoretical sense because a cohesive family provides a framework in which a family can function optimally (see par 2.5). Such families serve as buffers against the stressors posed by extrafamilial interactions, thereby serving as safe havens. *Family Cohesion* has also been found to have significant and positive effect on *Life Satisfaction* ( $MI=4, 55$ ). The prominent position of the family in people's lives suggest that its optimal functioning will serve as the deciding factor in other facets of life, such as life satisfaction (see par 2.5). *Job Demand* has been found to have significant, positive and reasonably strong effects on *Job Satisfaction* ( $t=9, 16$ ). This could still be explained by cognitive activation theory and the job characteristics model of Oldham and Hackman. The RMSEA of the expanded model improved to 0,042.

#### 4.9 Summary

The purpose of this chapter was to report on the results obtained from this study. The problem of missing values, which plagued the data, was encountered. The possible solutions were discussed with the advantages and disadvantages of each. These alternatives included deletion of missing cases, using means, hot-decking, single imputation, multiple imputation and imputation by matching. Imputation by

matching was selected to deal with the missing data in this study. The scales were then item analyzed to determine the reliability of the scales, followed by dimensionality analysis to confirm the uni-dimensionality of the subscales. The data was then normalized, followed by the fitting both measurement and structural model.

*Job Demands* were not found to have a significant and positive effect on *WFC*. *Family Cohesion* was also not found to have a significant and positive effect on *WFC*. On endogenous variables, *WFC* has been found to have a significant and positive effect on *Stress*. *WFC* has also been found to have a significant and negative effect on *Job Satisfaction*. On the other hand, *WFC* has not been found to have a significant and negative effect on *Marital Satisfaction*. *WFC* has also not been found to have a significant and positive effect on *Life Satisfaction*. *Stress* was also not found to have a significant and positive effect on *Task Performance*. *Stress* has also not been found to have a significant effect on *Family Stability*. *Job Satisfaction* was also not found to have a significant and positive effect on *Task Performance*. *Job Satisfaction* has also not been found to have a significant and positive effect on *Stability*. *Marital Satisfaction* was found to have a significant and positive effect on *Stability*. *Life Satisfaction* was found to have a significant and positive effect on *Stability*. *Stability* was also not found to have a significant and positive effect on *Task performance*. *Task Performance* has been found to have a positive and significant effect on *Stability*. Lastly, *Stability* has not been found to have a significant and positive effect on *Family Cohesion*.

## CHAPTER 5

### DISCUSSION OF RESEARCH RESULTS

#### 5.1 Introduction

This chapter is aimed at discussing the research results emanating from this study (presented in chapter 4). This will be done by linking the results with the original objectives of this study, as well as the theory and research used to support the arguments proffered in the study.

#### 5.2 Background

The main aim of the study was to develop and test a structural model that explicates the nature of family stability under conditions of deployments. The point of departure was the realisation of the inseparable nature of the relationship between job performance and family stability. The first step was to identify how deployments, as operationalised as job demands initiate the process which culminate into instability in families of deploying soldiers. The process was then formulated into a model and was tested to determine how it unfolds and create attitudes, emotions and behaviours that ultimately threaten the stability of families. It was theorised that the results of this research would provide the SANDF decision-makers with the understanding that will enhance them to develop and implement policies that will ameliorate the deleterious effects of deployments on families. The objectives of the study (see par 1.4) was to establish the nature of the causal linkages between job demands and reciprocal outcome variables of job performance and family stability. The nature of the research design, *ex post facto* precludes the drawing of definite and causal inferences from significant path coefficients.

#### 5.3 Summary of the results of the SEM process

The data obtained from the Family Stability questionnaires were analysed using structural equation modelling (SEM). Details of these findings are discussed below.



### 5.3.1 Model fit

Measurement model fit refers to the extent to which a hypothesised model is consistent with the data and provides information about the validities and reliabilities of the observed indicators (Diamantopoulos & Sigauw, 2000). Measurement model fit was analysed followed by the structural model fit. The structural model is that component of the general model that prescribes relations between the latent variables and observed variables that are not indicators of latent variables (Jöreskog & Sörbom, 1993). The structural model was assessed for goodness-of-fit with the purpose of explaining why indicator item parcel variables are correlated in the manner observed in the covariance matrix. A summary of findings considers the results of the fitting exercises and the establishment (or absence) of any significant links between the variables of the model. The results of the goodness of fit hypothesis tests of exact fit and close-fit are summarised below in Table 13.

Table 13: Summary of exact-fit and close-fit statistics

<b>MODEL</b>	<b>Satorra-Bentler Scaled Chi-Square (Exact Fit)</b>	<b>RMSEA (close fit)</b>
<b>Measurement Model</b>	177.07(P=0.00) exact H <sub>0</sub> fit rejected	0,036(P=0,63) Close fit H <sub>0</sub> not rejected
<b>Structural Model</b>	171.94(P=0.00) exact H <sub>0</sub> fit rejected	0.030(P=0.89) Close fit H <sub>0</sub> not rejected

As reflected in Table 13, in the case of measurement model, the null hypothesis of exact fit is rejected, but the null hypothesis of close fit is not rejected (see par 3.3). The fitting of the structural model resulted in the rejection of the null hypothesis of exact-fit, while the null hypothesis of close fit is not rejected. It can therefore be concluded that the structural model allows for a reasonable approximation of the observed covariance matrix.

The exact-fit and close-fit statistics, together with the spectrum of goodness-of-fit indices (see par 4.7) allow the conclusion that, overall, the proposed theoretical family stability model shows a good to reasonable, but not perfect, fitting model.

When assessing the suitability of the model,  $\chi^2$  (see par 3.7) indicates the degree of fit between the causal model and the data set to which it is applied. If the causal model does not fit the data set, the result is an ambiguous non-confirmation of the model as a whole. From this, a conclusion would follow that the model does not provide an acceptable explanation for the observed covariance matrix. In contrast to this, a high degree of fit between the observed and estimated covariance matrices provides explanation of observed and estimated covariances (Oehley, 2007).

Given the acceptable structural model fit (see Table 13) an examination of the B and  $\Gamma$  matrices was undertaken in order to establish the significance of the theoretical linkages proposed by the Family Stability model depicted in Figure 10. The interpretation of the results will provide information with which to determine whether the theoretical relationships specified at the conceptualisation stage are indeed supported by data (see par 3.2). The discussion regarding the interpretation of results will follow.

### 5.3.2 Gamma matrix

The results of this research (Table 10) indicate insignificant positive relationships between the exogenous latent variable, *Job Demands* and the endogenous variable of *WFC*. This is contrary to the initial theoretical expectations. One possible explanation for this might be partly explicated by the mediating effects of support from families and the SANDF (see par 2.11). Research has consistently indicated the negative relationship between supportive work environment and WFC. The second reason can be the voluntary nature of deployments. Since all deploying members are requested to complete a social work questionnaire that emphasise the voluntary nature of their deployment (see par 2.9) and the knowledge of support structures in the unit, this is expected to ameliorate the deleterious effects of deployments. Another reason can be the financial benefits that accrue from deployments. Deploying members receive relatively lucrative monetary packages that may offset the inconvenience caused by their absence from their families (see par 2.9). The research in the military found that soldiers

were willing to endure various forms of discomforts for the fiscal benefits (Yang et al., 2008).

The second finding of the study (Table 10) is a non-significant relationship between *Family Cohesion* and *WFC*. This is also contrary to the initial theoretical expectations. This can be partially explained by the patriarchal nature of most military families (see par 2.10.1) where the husband is in the military. In such families, the husband's authority is sovereign, allowing less effect on boundaries during his absence (see par 2.10.1). This is congruent with the findings that South African men still control the finances even when deployed far from their families (Van Breda & Potgieter, 2002). Lagrone(1978) concurred that in patriarchal families, family members are compelled to comply to the requirements of the military, with the military member expected to instil discipline. Furthermore, the support from the family may serve as a mediating variable between the Family Cohesion and WFC. The instrumental support proffered by family members may ameliorate the disruptive effects of deployments, thereby minimising WFC (Frye & Breaugh, 2004).

After the model was modified, new significant paths that were theoretically sound emerged (Table 10). *Job Demands* were found to have a significant and strong positive effect on *Job Satisfaction*. This could be explained by the job characteristics model (Landy, 1985) (see par 2.6). In contrast with the units where soldiers are kept idle daily, deployments provide them with variety, challenges and the superior status they do not experience in their countries. They also receive recognition from the entire world for their contribution in peacekeeping missions, indicating the significance of their involvement (Strafford & Grady, 2003)(see par 2.9).

A significant positive relationship was also found between *Family Cohesion* and *Life Satisfaction* (Table 10). Since life satisfaction emanates from the evaluation of overall aspects of life, satisfaction with one's family, which is an important domain in many people's lives, is likely to result in overall life satisfaction(Wallace & Wallace,1985)(see par 2.14.4). This is especially the case in SA as one of the highly family orientated societies in the world (Amoateng, 2004)(2.14.6).

Furthermore, a cohesive family is also likely to provide emotional and instrumental support to its members, which can culminate into life satisfaction (Rosen & Moghadam, 2000)(see par 2.8).

### 5.3.3 Beta matrix

WFC is purported to be the result of incompatibility between family and job demands (see par 2.14.6). It was hypothesised that *WFC* will have a positive direct influence on *Stress*. In this instance, the null hypothesis was rejected ( $t=5.27$  at  $p=0,37$ )(Table 6), showing that *WFC* is significantly and positively related to *Stress*. This finding is consistent with the large body of research that has shown *WFC* to have a significant positive effect on stress (Greenhouse & Callanan, 1994; Schreuder & Theron, 2004; Kim & Ling, 2001, Mathews, Congers & Wickarama, 1996).

*WFC* is significantly negatively related to *Job Satisfaction* ( $t=-3.21$ ). Again, the null hypothesis was rejected (Table 6). This could be explained by the depletion of essential resources by *WFC*. Resources such as time and energy are utilised by the competing demands, with the job domain consuming more time, creating a feeling of dissatisfaction. This is in line with Marks' scarcity approach, which highlights the negative consequences emanating from conflicting demands (Lo & Ng, 2003)(see par 2.11).

The effect of *Life Satisfaction* on *Stability* ( $t=2.00$ ) has also been found to be positive and significant (Table 6). Satisfaction with lifestyle, which is part of life satisfaction, refers to the degree to which the spouses are pleased with the social arrangement of their marriage (Diener et al., 1985) (see par 2.13.4). Included under this heading are satisfaction with the number of children, their employment, the degree of supportive interaction the couple has in the community and their socio-economic level (Wallace & Wallace, 1985). The *Stability* in the family is unequivocally related to *Life Satisfaction* (2.14.4).

*Task Performance* has been found to have a significant positive effect on *Stability* ( $t=4, 40$ ) (Table 6). This could be explained by the central role played by jobs in

people's lives. The job enhances men to play their roles in their family systems as providers (Hunter,2001)(see par 2.4.1). Furthermore, the involvement of women in deployment can also be partially attributed to economic benefits derived from such involvement (see par 2.10.9). The utility of fiscal benefits emanating from job is used to sustain the livelihood of families, strengthening the family stability.

The B matrix (Table 6) fails to provide support for the remaining hypotheses, as the null hypothesis in each instance is not rejected. These results therefore conclude that:

*WFC* does not have a significant effect on *Marital Satisfaction*. This can be explained by the historical events in SA. Before the first democratic elections in SA, economic policies demanded families to be separated, with workers, mostly males in barracks in company towns and children and women left behind at home (Funder, 2006). Those events conditioned South Africans, particularly Africans to get used to spending time without the presence of the breadwinner. This is contrary to what is happening in most developed societies where all family members spend most of their time together as a family, undisturbed by work commitments (Amoateng, 2004).

*WFC* was also not found to have a significant effect on *Life Satisfaction*. The previous explanation is still informative. The salience given to work by most members in the society may subdue the deleterious effects of separation emanating from deployment. The separation emanating from deployment can then be reduced to inconvenience that can be tolerated (Yang et al., 2008; Kelty, 2005) (see par 2.14.5).

*Stress* does not have a significant and negative effect on *Task Performance* (basic task performance) (Table 6). This could be explained by cognitive activation theory of stress that holds that people need a certain magnitude of stress to perform optimally. The theory holds that stress is not inherently bad but produces neuro-physiological activation from one level of arousal to a higher level of arousal (Reme,Erikse, & Ursin,2008).

*Stress* has not been found to have a significant negative effect on *Stability* (Table 6). The results could be explained by the effective support system provided by the family and the employing organisation (Fenlason & Beehr, 1994)(see par 2.8). Furthermore, the inoculation from challenges posed by distant work environment could also serve as a buffer against stress (Funder, 2006).

*Job Satisfaction* was not found to have a significant effect on *Task Performance* (basic task performance)(Table 6). This could be explained by the patriarchal nature of the military profession, especially on deployment. The commanders provide instructions on what needs to be done and how, and the subordinates execute, without any influence from personal attitudes such as job satisfaction (Lagrone, 1978)(see par 2.6).

*Job Satisfaction* was not found to have a significant effect on *Stability* (Table 6). The centrality of family to most people makes it less affected by the challenges posed by the work environment (Amoateng, 2004)(see par 2.14.6). Furthermore, the family is used by many people as a safe haven against the challenges posed by the workplace and as such the challenges posed by the work environment will ostensibly be buffered(Bell et al.,1996) (see par 2.8).

*Marital Satisfaction* has been found to have a significant effect on *Stability* (Table 6).This could be explained by the omnipotence of the family in people's lives (Funder, 2006) (see par 2.14.6). Despite the distractions that may emanate from the work environment in a form of job demands leading to insufficient time allocated to family demands, the commitment to the family provides a means to ameliorate those challenges (Pallock & Lamborn, 2006) see par 2.12.1).

*Life Satisfaction* has not been found to have a significant effect on *Task Performance* (Table 6).Job performance as one of the highly valued roles in life can prevail despite challenges emanating from other factors in life (Pflanz, 2006)(see par 2.14.5).Furthermore, the importance attached to peacekeeping missions and accompanying recognition may provide soldiers with the sense of purpose, diminishing the negative effects of other challenges experienced in life (Strafford & Grady,2003)(see par 2.9).

*Stability* has not been found to have a significant effect on *Task Performance* (Table 6). The prominence of the job was not weakened by factors in the family environment, further highlighting the importance attached to a job (Funder, 2006) (see par 2.14.5). Furthermore, the lack of autonomy on deployment and in the unit can suppress the possible negative effects of family instability on job performance, rendering them insignificant (Lagrone, 1978) (see par 2.8).

*Stability* has not been found to have a significant effect on *Family Cohesion* (Table 6). The prominent position of the husbands in their families may crystallise them into disengaged families, allowing them to resume their roles on their return (Van Breda, 1995). Despite the negative effects on the effectiveness of the family functioning in their absence, the structural components of the family are constantly maintained (Van Breda & Potgieter, 2002) (see par 2.4.3). Furthermore, the acclimatisation to the absence of the father in the family due to employment tends to reduce the potential disruption on the family (Amoateng, 2004; Funder, 2006).

#### **5.4 Discussion of results**

The military organisations are labour intensive-organisations that rely on their human resources for the performance of their duties. Their importance of their role is pronounced by their task of stabilising the countries in which they work (LeRoux, 2004). This mammoth task however demands a workforce that is unflinching in the execution of its duties, undisturbed by other domains such as the family. This is important considering the dual spillover effect of the work and family domain, suggesting that what happens in the work domain has the effect on what happens in the family domain (Kreiner, 2006) (see par 2.11). This issue is made essential by the diversity of the workforce that participates in contemporary operations. This necessitates the utilisation of soldiers not overburdened with family problems to perform their roles efficiently. The SANDF is also in that role, endowed with the responsibility of stabilising the continent. The objective of the study was to establish the nature of causal linkages between deployments operationalised as job demands and family stability.

In line with the foregoing arguments, the SANDF deploys its members for a minimum period of six months (Bruwer, 2003)(see par 2.6). This suggests that during the period of absence, deployed family members cannot participate in their roles in their family systems (Van Breda, 1995). The incompatible demands between the military and family create the conditions for WFC (see par 2.11). Consequently, it was expected that there would be a significant and positive relationship between job demands and WFC. However, the study failed to find support for the hypothesis (Table 6). It is inexplicable that the inherent competing domains of family and high job demands posed by deployment would not contribute to WFC. The resultant conclusion is inconspicuous in the light of the extensive research findings to the contrary. It is not practicable to argue that job demands do not precipitate the process that culminates into unstable families. The results can be explained by role salience. This suggests that most members in the organisation give priority to the demands of the organisation, thereby diminishing the incompatibility that may emanate from such demands (Greenhaus & Callanan, 1994). Furthermore, the majority of members in the study were raised in the environment characterised by migrant breadwinners (Amoateng, 2004).

Family Cohesion, which characterises many military families, is threatened by the long term deployments. The military deployments imply the removal of a significant family member from his/her family system (see par 2.6). This implies the consequent disruption of the family functioning for the duration of the deployments (see par 2.10.1). It was then hypothesised that the incongruence between Job Demands and Family Cohesion will result into WFC. However, the results (Table 6) failed to support the hypothesis. The results could be explained by the utility and prevalence of extended families (Castiglia, 1999). Extended family members tend to assume the roles that were performed by the deploying member, making the effects of deployment less visible (see par 2.2).

Work-to-family conflict with its depletion of resources and resultant time-based conflict and strain based conflict, makes it difficult for members to be satisfied with their marriage (Lo & Ng, 2003)(see par 2.11). The results (Table 11) failed to support the hypothesis that there is a directional linkage between WFC and *Marital Satisfaction*. This finding contradicts countless studies that have demonstrated that



work and family domains are mutually influential in both beneficial and deleterious ways, with employment having the propensity to affect the functioning at home (Brockwood, 2007). The historical practices of migrant labourer normalised the absence of a parent, especially a man in the family. That exposure desensitised most people to the disruptive nature of such separations (Funder, 2006).

Work-family-conflict does not only affect *Marital Satisfaction* but other aspects of people's lives such as *Life Satisfaction* are affected too. Since *Life Satisfaction* is based on most aspects of people's lives, it is inevitable that *WFC* will also have pronounced effects. This emanates from the fact that work and family constitute important aspects of people's lives, hence *Life Satisfaction* will be affected (Diener et al., 1985)(see par 2.13.4). However, there was no support for the hypothesis of the directional linkage between *WFC* and *Life Satisfaction* (Table 11). The results could be attributed to the prominent role played by extended family. Extended family has the propensity to enhance continuity in the family despite the absence of one important member of the family system. Extended families absorb the shock that could otherwise create disruptions of the family functioning (Castiglia, 1999) (see par 2.2).

One of the consequences of *WFC* is *Stress* which is purported to affect task performance negatively. This is premised on the fact that stressed employees are affected negatively both psychologically and physiologically, thereby affecting performance (Ahmadi & Alireza, 2007) (see par 2.13.1.4.3). However, there was no support for the directional linkage between *Stress* and *Task Performance* (Table 11). This is contrary to what is in the literature with the direct and negative link between stress and job performance being well established.

Mesmer-Magnus and Viswesvaran(2005) found the consequences of stress emanating from *WFC* to be less satisfactory work performance, tardiness, absenteeism, turnover, low job involvement and decreased morale(see par 2.14.1.4.3). However, cognitive activation theory of stress and theory of natural selection may be informative (Fletcher, 2006). According to cognitive activation theory, people need a certain magnitude of stressor to perform. The stress serves to arouse people to perform optimally. The stress is therefore a positive and

desirable response, which mobilise the physiological resources to initiate and improve performance (Ursin & Eriksen, 2004). Furthermore, theory of natural selection holds that people with certain characteristics tend to prefer certain environments, which they find meaningful. In line with this reasoning, it is plausible that the military environment consists mainly of people who are adventurous and prefer stimulation from their environment (Fletcher, 2006).

The effects of *Stress* are not only confined to *Task Performance* but *Family Stability* too. The study (Table 11) moreover, does not confirm the hypothesis that *Stress* has a significant effect on *Stability*. These results could be partly explicated by the buffering effect of support on stressors (Rosen & Moghadam, 2000). The literature (see par 2.8) is replete with the findings supporting the buffering effect of stress on families. In the SANDF, the availability of support from the multiprofessional team could explain the less effective role of stress on family stability. This team provides support to family members left behind in most social challenges that the family might face and is also responsible for the well-being of the family while the spouse is deployed. The team also presents resilience programs to deploying members before deployment and to family members after deployments (Van Breda, 2002).

*Job Satisfaction* is another result of *WFC* and was purported to have a positive effect on *Task Performance*. The results (Table 11) also failed to confirm the hypothesis that *Job Satisfaction* has a significant effect on *Task Performance*. These results are contrary to what the literature purports (see par 2.13.2). Spangenberg and Theron (2004) asserted that employee satisfaction is the barometer that indicates the extent to which the organisation will perform efficiently. However, in operational context, the task performed by peacekeepers is ill-defined and ambiguous, making it difficult for them to discern the extent to which they performed optimally. The situation is further exacerbated by the restrictive mandate that decries any initiative from peacemakers even if the situation is opportune, leaving members suffering from UN Peacekeeping soldier syndrome (see par 2.7). These sometimes lead soldiers to question the veracity of the presence of peacemakers amidst the suffering of locals that they can help, creating stress (Lloyd & Van Dyk, 2007).

The effects of *Job Satisfaction* are not only limited to *Task Performance* but *Stability* too. The study results (Table 11) did not confirm the hypothesis that *Job Satisfaction* has a significant effect on *Stability*. This result can be explained by the dichotomised relationship between the military organisation and the family. The military demands uninterrupted face time and commitment of the members for the entire duration of deployment. In addition, the members are 'institutionalised' (Lagrone, 1978), regimentalised (Kelley, 2003), and submissive and dictated by a small number of seniors (see par 2.6), precluding the possibility of positive experience of deployments to accrue to families. This is in contradiction to what the family expects, sensitive and nurturing parents.

The hypothesis that *Marital Satisfaction* has a significant positive effect on *Task Performance* was not confirmed (Table 11). This could be explained by the segmentation that is fostered by military leaders (see par 2.11). The insulation of members by the military during deployment may inhibit possible spillover of positive marital experiences to work environment that could culminate into high performance. Moelker and Van der Kloet's (2003) assertion that if the military wanted its members to be married it would issue them with wives is informative, indicating the disparaging organisational culture incompatible with other role demands.

The results (Table 11) show that the hypothesis that *Marital Satisfaction* has a positive effect on *Stability* has been confirmed. This is congruent with the theoretical arguments (see par 2.13.3) that hold that *Marital Satisfaction* is an indispensable prerequisite for *Family Stability* (Voydanoff, 2005). Family Stability is purported to be the index of the nature of mutual identification and sharing of responsibilities and commitments of the post marital period of husband and wife (Kang & Jaswal, 2009). Couples satisfied with their marriage were found to be supportive of each other, providing both instrumental and emotional support needed to manage the extrafamilial challenges (Fowers, Montel & Olson, 1996). Such couples have frequent interaction between partners and share activities and have fewer disagreements and arguments between them. They also have fewer problems that arise from jealousy, substance abuse and instability (Brockwood, 2007).

*Life Satisfaction* as another factor affected by *WFC*, and is purported to have a significant and positive effect on *Task Performance*. The study (Table 11) does not confirm that *Life Satisfaction* has a significant positive effect on *Task Performance*. The relentless, omnipotent character of the military organisations may partly explain these results. Their prominent roles in members' lives make other aspects of life less salient, thereby overshadowing the effects that non-work roles may have on task performance (Amoateng, 2004) (see par 2.6). Furthermore, the greedy nature of the military organisations usurp all other activities in soldiers' lives, making a significant claim on all essential resources such as time, energy and effort (Lagrone, 1978).

The results (Table 11) show that *Life Satisfaction* has a significant positive effect on *Stability*. Lance and Ben-Ari (2008) assert that the irritating, frustrating, distressing demands of everyday life and the stressful features of the enduring relationships and roles have cumulative and significant effects on physiological and physical well-being, and affect marital stability. Since *Life Satisfaction* encompass numerous factors in people's lives, with family and work as important aspects (2.13.4), satisfaction with both factors will spillover to *Stability*. Furthermore, the prominence of the family in South African population's lives suggests that satisfaction with other aspects of life will also affect the *Stability* of families (Lee et al., 2002) (see par 2.13.6).

The study (Table 11) did not confirm the hypothesis that *Stability* has a significant effect on *Task Performance*. The results are in contrast with the findings by Cavanagh and Schiller (2006) who found exceptional performance in members from stable families. These results could be explicated by the alienation between the military organisation and the members' families. The divide is widened by distant deployments with their exclusive claim on members, making them less susceptible to family factors that can affect their job performance (Lagrone, 1978) (see par 2.6). Furthermore, the salience of organisational roles may also make members less influenced by family factors (Amoateng, 2004). The fiscal benefits that accrue to deploying members may offset possible resultant shortfalls. This is supported by the other research findings that indicate that soldiers can endure difficulties and inconvenience for fiscal benefits (Yang et al., 2008) (see par 2.9).

The results did however (Table 11) confirm that *Task Performance* has a significant effect on *Stability*. Rantanen, Kinunen, Feldt and Pulkkinen (2008) assert that the quality of performance in work role affects the intrinsic and extrinsic rewards that will accrue. In this context, high performance in the work environment can be rewarded with recognition, which may have fiscal benefits to the member and family, especially those endowed with the responsibilities of providing the livelihood in the families (see par 2.4.1). Furthermore, the literature indicates that the ability of the husband to serve as a provider and the availability of sufficient fiscal resources is associated with stable families (Lewin, 2005). In contrast, the opposite was found to be true, with unemployment resulting in lack of financial resources often cited as the main cause of instability and break-ups (De Rose, 1992).

The study (Table 11) does not provide support for the hypothesis that directional linkage exists between *Stability* and *Family Cohesion*. These results could be partly explained by the chronic sense of fragmentation that befalls military families (Van Breda, 1995). Although the family may appear to function optimally, the underlying structural deficiency caused by separation is usually present (McCubbin & Dahl, 2000) (see par 2.10.5). This emanates from the coping mechanisms used by the families to deal with the roles of the absent member to enhance continuous family functioning. Van Breda (1999) assert that other families close ranks while the family member is deployed, resulting on post-deployment integration of the family member. Others keep ranks open, making it difficult for the family to function in the absence of the deployed member, while the transition to accommodate the deployed member is smooth (Moelker & Van der Kloet, 2003) (see par 2.4.3).

In general, although both measurement and structural models fit the data reasonably well, there is an area of concern. Some of the results are in contradiction with the established research findings. This necessitates the perusal of possible explanations for the findings. The first area for consideration is the process of developing the theoretical framework of the model. Oehley (2007) and Diamantopoulos and Sigauw (2000) assert that a poorly conceptualised model is unlikely to produce valuable results with LISREL method because; the hypothesised relationships between the latent variables must be specified clearly between endogenous and exogenous variables, and the specific ordering of the

exogenous and endogenous variables and the number and expected direction of the linkages between variables must be correct. In this case, the variables and their linkages in the *Family Stability* model are specified and based on sound theory. Another reason is the omission of important variables from the model, resulting in specification error culminating into the proposed model not being a true approximation of the population and variables under study. Furthermore, there is a possibility that certain variables may mediate or moderate the relationship between Family Stability variables and outcome variables. In addition, Diamantopoulos and Sigauw(2000) recommend a maximum of 20 variables in order to avoid problems in model fit. In this model, the number exceeds the recommended one, possibly contributing to lack of sufficient significant pathways within the model.

Model modification is another area that warrants consideration. Modification indices indicate the extent to which freeing the current fixed parameters within the model would significantly improve the fit of the model (Diamantopoulos & Sigauw, 2000). The modification indices and the completely standardised expected change statistics provided convincing reasons for model modification. Examination of the Beta matrix showed that additional seven paths would significantly improve the fit of the model. The standardised expected change associated with freeing those fixed parameters of Beta was sufficient to justify the consideration of modifying the model. Possible theoretical explanations were also available to justify the number of the proposed changes in the model. Examination of the  $\Gamma$  matrix indicated that an additional three paths would significantly improve the fit of the model. Theoretically sound explanations are also available to justify such proposed modifications.

## **5.5 Chapter summary**

In this chapter the results of the study were discussed. The chapter started with the discussion of model fit, and then discussed Beta matrices that were followed by Gamma matrices. The results were then discussed, starting with significant relationships, followed by uncorroborated findings. Lastly, the model modification to improve the fit was also discussed.

The study will contribute to the understanding of how deployments affect the stability of families. This is the first study of its kind in the SANDF, which is facing challenges of the decline in the interest to deploy, especially professionals who are from inception, few. The results of this study deviated from studies from other countries, especially European countries. This could be explained by the peculiar factors in the South African context such as extensive use of extended families which tend to absorb the effects of structural disruption caused by deployments. Furthermore, history shaped Blacks (majority in the study)'s perception towards the absent parent. The South African population is not significantly dishevelled by the deployment of a parent due to the acclimatisation to one parent being a migrant labour, only available for a short period of time. Lastly the study should be informative about aspects of deployment that need attention (such as the full exploration of extended families, and provision of adequate support, both formal and informal), to ensure sustainable motivated workforce. The peculiar characteristics of SA are not necessarily negative but can be used as the building blocks that do not exist in other countries.

## CHAPTER 6

### 6.1. Conclusions

The proposed family stability model has proved to make meaningful contribution. The highlights of the results of the model analysis include the adequate to good fit of the model. This was the main aim of the study (see par 1.4). Furthermore, the significant model parameters and paths were established. On the other hand, the inability to confirm certain hypothesis is disappointing. In sum, it can be said that this model shows close fit, while some paths were corroborated and others were not. It is therefore reasonable to conclude that the model is meaningful and further research should focus on the inclusion of mediating variables on the model.

The important findings of this study are the confirmation of the significant link between the endogenous latent variable, *WFC* and the endogenous latent variables of *Stress* and *Job Satisfaction*. The magnitude of these path coefficients indicates the substantial influence of *WFC* (which is theoretically understood to emanate from *Job Demands* and *Cohesive Family*) on these important *Family Stability* variables. The logical conclusion that can be drawn from this is that the high job demands which are beyond the control of a soldier pose challenges by demanding him/her to be available for deployment, thereby triggering *WFC* which then result in stress that is known to have deleterious effects on the individual employee, the family, the co-workers and the organisation at large. Furthermore, the commencement of *WFC* also results in deterioration of *Job Satisfaction* which is extolled by authors such as Theron and Spangenberg (2004) as one of the most important determinants of *Task Performance*. This has important implications considering the importance of the job performed by the peacekeepers of stabilising the continent. This is further pronounced by the ambiguous nature of the mandate and the practical effects of poor performance such as increased death toll of civilians and warring parties and the debilitating destruction of infrastructure necessary for the wellbeing and development of the states in questions.

Mention must also be made of the veracity of the significant link between the endogenous variable, *Marital Satisfaction* and the endogenous latent variable



*Stability*. The importance of this finding is pronounced by the acknowledgement of the segmentation paradigm that argued that what happens in the family domain has no effect on work domain. The inextricable intertwined relationship prompted other researchers to argue that the observation of one domain cannot be completed without the inclusion of the other. In this context, marital stability is an absolute necessity that cannot be ignored if soldiers' performance is to be optimised. This finding enjoins the policymakers to heed the importance of families in soldiers' lives and the resultant effects on job performance. The finding of the significant link between *Task Performance* and *Stability* supports the foregoing argument. The reciprocation of these domains indicates that high performance in work environment is related to family *Stability*. This result is irrevocable, considering the value members attach to those domains, family and work. *Life Satisfaction*'s significant relationship with task performance cements the foregoing argument. Satisfaction with important domain in life, work, should inevitably result in *Stability*, with the transference of positive attitudes from work environment affecting the perception of life which then culminate into *Stability* in the family.

## **6.2. Recommendations**

Using the available research results as the impetus, the researcher proposes the following recommendations to the SANDF leaders and policymakers for future effective peacekeeping missions.

### **a. Provision of a mandatory cooling-off period**

The members should not be allowed to deploy more than once in a period of 18 months to allow the family to recuperate and be functional. The lesser the frequency of disruption, the better the chances of the family recovering fully. This has policy implications because the current instruction is directory but not peremptory, thereby giving members' scope for broad interpretation to secure an opportunity to deploy.

b. Strengthening of the family support system

Since the buffering role of support has been fully established in many studies, the focus should be on its systematic application. The current piecemeal approach used in a fragmented manner deprives the family of the invaluable resource that can be helpful. The support system needs to be structured with a person playing that role on full-time basis to enhance continuity and the smooth operation of the programs. Furthermore, the magnitude also needs to be broadened to include the permanent staff to assist families and deploying members with needed support.

c. The instilling of social leadership on all levels

It is a well-known fact that leaders create an organisational climate. This necessitates leaders to be attuned to the social needs of soldiers and be considerate to family challenges that may impinge on the soldier's face time. The draconian approach that characterises bureaucratic organisations such as the military creates an unfavourable environment, making members feel trapped. This will in turn inhibit desirable attitudes and behaviours suited for such environment such as organisational citizenship behaviours.

d. The provision of necessary infrastructure

Despite the infrastructure limitations inherent in such operations, it is necessary for certain infrastructure such as communication antennas to enable communication with the home front. This will alleviate the uncertainty that accompanies long periods of 'silence' from the deployed member. This is highlighted by the highly precarious environment in which peacekeepers function.

e. The provision of a psychologist to every contingent deployed

The unstable political climate of the environment in which the peacekeepers operates suggests the ever-present possibility of casualties. The treacherous terrain that predisposes peacekeepers to vehicle accidents, necessitating them to be debriefed on trauma, further highlights this need.

### 6.3. Limitations

The nature of the study, *ex post-facto* design precludes the drawing of causal conclusions on the findings. This is a limitation inherent in such approach since the results on dependent variable cannot be solely attributed to independent variables. Furthermore, the biggest limitation in self-report studies is also applicable. Factors such as social desirability may have affected some of the responses. Furthermore, the model's modification indices demand the acquisition of fresh data to test the model on. Lastly, the sample consisted mainly of members from the Army, followed by the Air Force, affecting the generalizability of the findings.

However, there are some concerns inherent in the use of this type of design. Internal validity, which is defined as the extent to which each item is fulfilling its intended role in the test, tends to be low (Kerlinger & Lee, 2000). Johnson (2001) also pointed some shortcomings of this design.

- The directionality of interrelated variables may be undermined,
- The relationship between variables may be spurious i.e, due to their common relationship with some other root cause,
- The inability to manipulate independent variables.

Despite its weaknesses, ex-post facto research is still important in social sciences because most problems in social sciences do not lend themselves to experimental enquiry (Babbie & Mouton, 2006).

### 6.4. Chapter summary

The chapter discussed the conclusions gleaned from the study, starting with the fit of the model and the significant path parameters. The important findings of the study were also discussed and their implications in the work environment. The importance of the family wellness was discussed, highlighting its effect on soldiers' task performance. Furthermore, the recommendations were made to decision-makers to ameliorate the deleterious effects of the competing demands between work and family, with the work domain taking primacy in most cases. The limitations of the study were expressed, with emphasis on the methodology and the narrow pool of the sample.

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## APPENDIX A

### List of abbreviations used on missing values

#### Missing values per item

1. PS1-Perceived stress scale item 1
2. PS2-Perceived stress scale item 2
3. PS3-Perceived stress scale item 3
4. PS4-Perceived stress scale item 4
5. PS5-Perceived stress scale item 5
6. PS6-Perceived stress scale item 6
7. PS7-Perceived stress scale item 7
8. PS8-Perceived stress scale item 8
9. PS9-Perceived stress scale item 9
10. PS10-Perceived stress scale item 10
11. PS11-Perceived stress scale item 11
12. PS12-Perceived stress scale item 12
13. PS13-Perceived stress scale item 13
14. PS14-Perceived stress scale item 14
15. MS1-Minnesota satisfaction item 1
16. MS2-Minnesota satisfaction item 2
17. MS3-Minnesota satisfaction item 3
18. MS4-Minnesota satisfaction item 4
19. MS5-Minnesota satisfaction item 5
20. MS6-Minnesota satisfaction item 6
21. MS7-Minnesota satisfaction item 7
22. MS8-Minnesota satisfaction item 8
23. MS9-Minnesota satisfaction item 9
24. MS10-Minnesota satisfaction item 10
25. MS11-Minnesota satisfaction item 11
26. MS12-Minnesota satisfaction item 12
27. MS13-Minnesota satisfaction item 13
28. MS14-Minnesota satisfaction item 14
29. MS15-Minnesota satisfaction item 15
30. MS16-Minnesota satisfaction item 16
31. MS17-Minnesota satisfaction item 17
32. MS18-Minnesota satisfaction item 18
33. MS19-Minnesota satisfaction item 19
34. MS20-Minnesota satisfaction item 20
35. LS1-Satisfaction with life item 1
36. LS2-Satisfaction with life item 2
37. LS3-Satisfaction with life item 3
38. LS4-Satisfaction with life item 4
39. LS5-Satisfaction with life item 5
40. MSC1-Marital satisfaction item 1
41. MSC2-Marital satisfaction item 2
42. MSC3-Marital satisfaction item 3
43. MSC4-Marital satisfaction item 4
44. MSC5-Marital satisfaction item 5

45. MSC6-Marital satisfaction item 6
46. MSC7-Marital satisfaction item 7
47. MSC8-Marital satisfaction item 8
48. MSC9-Marital satisfaction item 9
49. MSC10-Marital satisfaction item 10
50. MSC11-Marital satisfaction item 11
51. MSC12-Marital satisfaction item 12
52. MSC13-Marital satisfaction item 13
53. MSC14-Marital satisfaction item 14
54. MSC15-Marital satisfaction item 15
55. MSC16-Marital satisfaction item 16
56. MSC17-Marital satisfaction item 17
57. MSC18-Marital satisfaction item 18
58. MSC19-Marital satisfaction item 19
59. MSC20-Marital satisfaction item 20
60. MSC21-Marital satisfaction item 21
61. MSC22-Marital satisfaction item 22
62. MSC23-Marital satisfaction item 23
63. MSC24-Marital satisfaction item 24
64. MSC25-Marital satisfaction item 25
65. MSC26-Marital satisfaction item 26
66. MSC27-Marital satisfaction item 27
67. MSC28-Marital satisfaction item 28
68. MSC29-Marital satisfaction item 29
69. MSC30-Marital satisfaction item 30
70. MSC31-Marital satisfaction item 31
71. MSC32-Marital satisfaction item 32
72. MSC33-Marital satisfaction item 33
73. MSC34-Marital satisfaction item 34
74. MSC35-Marital satisfaction item 35
75. FAC1-Family adaptability and cohesion item 1
76. FAC2-Family adaptability and cohesion item 2
77. FAC3-Family adaptability and cohesion item 3
78. FAC4-Family adaptability and cohesion item 4
79. FAC5-Family adaptability and cohesion item 5
80. FAC6-Family adaptability and cohesion item 6
81. FAC7-Family adaptability and cohesion item 7
82. FAC8-Family adaptability and cohesion item 8
83. FAC9-Family adaptability and cohesion item 9
84. FAC10-Family adaptability and cohesion item 10
85. WFC1-Work and family conflict item 1
86. WFC2-Work and family conflict item 2
87. WFC3-Work and family conflict item 3
88. WFC4-Work and family conflict item 4
89. WFC5-Work and family conflict item 5
90. WFC6-Work and family conflict item 6
91. WFC7-Work and family conflict item 7
92. WFC8-Work and family conflict item 8
93. WFC9-Work and family conflict item 9
94. WFC10-Work and family conflict item 10

- 95. FWC11- Family and work conflict item 11
- 96. FWC12- Family and work conflict item 12
- 97. FWC13- Family and work conflict item 13
- 98. FWC14- Family and work conflict item 14
- 99. FWC15- Family and work conflict item 15
- 100. FWC16- Family and work conflict item 16
- 101. FWC17- Family and work conflict item 17
- 102. FWC18- Family and work conflict item 18
- 103. JD1-Job demands item 1
- 104. JD2- Job demands item 2
- 105. JD3- Job demands item 3
- 106. JD4- Job demands item 4
- 107. JD5- Job demands item 5
- 108. JD6- Job demands item 6
- 109. JD7- Job demands item 7
- 110. JD8- Job demands item 8
- 111. JD9- Job demands item 9
- 112. JD10-Job demands item 10
- 113. JD11-Job demands item 11
- 114. JD12-Job demands item 12
- 115. JD13-Job demands item 13
- 116. JD14-Job demands item 14
- 117. JD15-Job demands item 15
- 118. JD16-Job demands item 16
- 119. JD17-Job demands item 17
- 120. JD18-Job demands item 18
- 121. JD19-Job demands item 19
- 122. JD20-Job demands item 20
- 123. CB1-Citizenship behaviours item 1
- 124. CB2-Citizenship behaviours item 2
- 125. CB3-Citizenship behaviours item 3
- 126. CB4-Citizenship behaviours item 4
- 127. CB5-Citizenship behaviours item 5
- 128. CB6-Citizenship behaviours item 6
- 129. CB7-Citizenship behaviours item 7
- 130. CB8-Citizenship behaviours item 8
- 131. T1-Task performance item 1
- 132. T2-Task performance item 2
- 133. T3-Task performance item 3
- 134. T4-Task performance item 4
- 135. T5-Task performance item 5
- 136. T6-Task performance item 6
- 137. T7-Task performance item 7
- 138. T8-Task performance item 8
- 139. T9-Task performance item 9
- 140. T10-Task performance item 10
- 141. T11-Task performance item 11
- 142. FAS1-Family stability item 1
- 143. FAS2-Family stability item 2
- 144. FAS3-Family stability item 3

- 145. FAS4- Family stability item 4
- 146. FAS5- Family stability item 5
- 147. FAS6- Family stability item 6
- 148. FAS7- Family stability item 7
- 149. FAS8- Family stability item 8
- 150. FAS9- Family stability item 9
- 151. FAS10- Family stability item 10
- 152. FAS11- Family stability item 11
- 153. FAS12- Family stability item 12

## **APPENDIX B**

### **Abbreviations used in item analysis**

- 1. Stress-stress**
- 2. Jobsat-job satisfaction**
- 3. Lifesat- life satisfaction**
- 4. Marst-marital satisfaction**
- 5. Famco-family cohesion**
- 6. WFC-work and family conflict**
- 7. JDemand-job demand**
- 8. OCB-organisational citizenship behaviours**
- 9. Taskperf-task performance**
- 10. Famstab-family stability**

## **APPENDIX C**

### **Abbreviations used in principal axis factoring**

- 1. Stress-stress**
- 2. Jobsat-job satisfaction**
- 3. Lifesat-life satisfaction**
- 4. Marsat-marital satisfaction**
- 5. Famco-family cohesion**
- 6. WFC(1)-work-to-family conflict**
- 7. WFC(FWC)-family-to-work-conflict**
- 8. JDemand(1)-job demands-job related factors**
- 9. JDemand(2)-job demands-organisational climate related factors**
- 10. OCB-organisational citizenship behaviours**
- 11. Taskperf-task performance**
- 12. Famstab-family stability**

## APPENDIX D

### Abbreviations used in standardised Lambda-X

1. Stress 1-first item parcel for stress
2. Stress 2-second item parcel for stress
3. Jobsa 1-first item parcel for job satisfaction
4. Jobsa 2-second item parcel for job satisfaction
5. Life 1-first item parcel for life satisfaction
6. Life 2-second item parcel for life satisfaction
7. Mars 1 -first item parcel for marital satisfaction
8. Mars 2-second item parcel for marital satisfaction
9. Famco 1-first item parcel for family cohesion
10. Famco 2-second item parcel for family cohesion
11. WFC 1-first item parcel for work and family conflict
12. WFC 2-second item parcel for work and family conflict
13. Jdem 1-first item parcel for job demands
14. Jdem 2-second item parcel for job demands
15. Taskp 1-first item parcel for task performance
16. Taskp 2-second item parcel for task performance
17. Stabil 1-first item parcel for family stability
18. Stabil 2-second item parcel for family stability